

PatBase - Search results 24 May 2017

Search query (2): fn=(57944665:195 or 59458422:130 or 54078398:130 or 56718603:110 or 55310664:110 or 60906350:100 or 60816827:100 or 55801467:100 or 53700837:100 or 53038740:100 or 57785316:95 or 41041521:95 or 3654671:95 or 65316312:90 or 58621709:90 or 54138127:90 or 54081058:90 or 13400006:90 or 54948803:85 or 52436198:85 or 50479951:85 or 44066310:85 or 42110982:85 or 28315270:85 or 28182485:85 or 64500802:80 or 60271935:80 or 58064374:80 or 55801469:80 or 54711325:80 or 52188573:80 or 49809545:80 or 48504008:80 or 48433153:80 or 42110983:80 or 38526887:80 or 33366430:80 or 32136621:80 or 31378452:80 or 29597826:80 or 52599652:75 or 50735355:75 or 29872026:75 or 10935977:75 or 10024613:75 or 58868002:70 or 56774058:70 or 56199806:70 or 54805888:70 or 52189844:70 or 49113948:70 or 48165477:70 or 47528411:70 or 44892516:70 or 43569618:70 or 43458894:70 or 34432753:70 or 28185631:70 or 23529712:70 or 20763006:70 or 14014541:70 or 13282500:70 or 12525497:70 or 11835205:70 or 10514571:70 or 10121135:70 or 9537250:70 or 1576952:70 or 49114909:65 or 43751020:65 or 42647092:65 or 41776253:65 or 33359844:65 or 31902420:65 or 31777504:65 or 31426436:65 or 31006358:65 or 30717432:65 or 30616092:65 or 30347954:65 or 28445036:65 or 15755200:65 or 11000212:65 or 8922721:65 or 8732333:65 or 24371:65 or 65493412:60 or 65493383:60 or 65470322:60 or 64914632:60 or 64286544:60 or 64166933:60 or 63579738:60 or 63579293:60 or 63304266:60 or 63038843:60 or 62191283:60 or 61113996:60 or 60817009:60 or 60461966:60)

Results: 100

Search history

Search PN=(wo2014191272) (Results 1)

1:

Search fn=(57944665:195 or 59458422:130 or 54078398:130 or 56718603:110 or 55310664:110 or 60906350:100 or 60816827:100 or 55801467:100 or 53700837:100 or 53038740:100 or 57785316:95 or 41041521:95 or 3654671:95 or 65316312:90 or 58621709:90 or 54138127:90 or 54081058:90 or 13400006:90 or 54948803:85 or 52436198:85 or 50479951:85 or 44066310:85 or 42110982:85 or 28315270:85 or 28182485:85 or 64500802:80 or 60271935:80 or 58064374:80 or 55801469:80 or 54711325:80 or 52188573:80 or 49809545:80 or 48504008:80 or 48433153:80 or 42110983:80 or 38526887:80 or 33366430:80 or 32136621:80 or 31378452:80 or 29597826:80 or 52599652:75 or 50735355:75 or 29872026:75 or 10935977:75 or 10024613:75 or 58868002:70 or 56774058:70 or 56199806:70 or 54805888:70 or 52189844:70 or 49113948:70 or 48165477:70 or 47528411:70 or 44892516:70 or 43569618:70 or 43458894:70 or 34432753:70 or 28185631:70 or 23529712:70 or 20763006:70 or 14014541:70 or 13282500:70 or 12525497:70 or 11835205:70 or 10514571:70 or 10121135:70 or 9537250:70 or 1576952:70 or 49114909:65 or 43751020:65 or 42647092:65 or 41776253:65 or 33359844:65 or 31902420:65 or 31777504:65 or 31426436:65 or 31006358:65 or 30717432:65 or 30616092:65 or 30347954:65 or 28445036:65 or 15755200:65 or 11000212:65 or 8922721:65 or 8732333:65 or 24371:65 or 65493412:60 or 65493383:60 or 65470322:60 or 64914632:60 or 64286544:60 or 64166933:60 or 63579738:60 or 63579293:60 or 63304266:60 or 63038843:60 or 62191283:60 or 61113996:60 or 60817009:60 or 60461966:60) (Results 100)

Title: ACCELERATOR FOR MINERAL BINDERS

Abstract: Source: US2016107938A A method for preparing a setting and hardening accelerator for mineral binders including a step of: (i) reacting a calcium compound CV with a silica sol SL, a molar ratio of Si:Ca being less than 0.1 during the reaction.

Classifications:

International (IPC 8-9): C01B33/24 C04B22/00 C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B22/00 C04B40/0039 C01B33/24 C04B22/0086 C04B28/04 C04B2103/12 C04B2103/14

US: 106/713 106/823 423/331

Family:

Publication number	Publication date	Application number	Application date
CN105246828 A	20160113	CN201480031170	20140521
CO15303903 A2	20160630	CO20150303903	20151222
EP3003977 A1	20160413	EP20140729611	20140521
US2016107938 AA	20160421	US20140894649	20140521
WO14191272 A1	20141204	WO2014EP60412	20140521

Priority:

EP20130169868 20130530 EP20140729611 20140521 WO2014EP60412 20140521

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): SIKA TECHNOLOGY AG

Inventor(s): (std): MARAZZANI BEAT ; MAEDER GILBERT ; MADER GILBERT ; KURZ CHRISTOPHE ; BURGE CHRISTIAN ; BUERGE CHRISTIAN

Inventor(s): BEAT MARAZZANI ; CHRISTIAN BUERGE ; CHRISTOPHE KURZ ; GILBERT MAEDER

Agent(s): TOBOS MATEUS ANDREA; SIKA PATENT ATTORNEYS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN105246828 A	20160113	LSPB	+	published / reissued	
CN105246828 A	20160113	LSPB	+C06	PUBLICATION	
CO15303903 A2	20160630	LSPB	+	published / reissued	
EP3003977 A1	20160413	LSPB	+	published / reissued	
EP3003977 A1	20160413	LSER	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160104
EP3003977 A1	20160504	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BUERGE, CHRISTIAN
EP3003977 A1	20160504	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : MARAZZANI, BEAT
EP3003977 A1	20160504	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : KURZ, CHRISTOPHE
EP3003977 A1	20160504	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : MAEDER, GILBERT
US2016107938 AA	20160421	LSPB	+	published / reissued	
US2016107938 AA	20151217	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MAEDER, GILBERT; KURZ, CHRISTOPHE; MARAZZANI, BEAT; AND OTHERS; REEL/FRAME:037320/0101 EFFECTIVE DATE : 20151203
WO14191272 A1	20141204	LSPB	+	published / reissued	
WO14191272 A1	20151130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14191272 A1	20151130	LSNP	+WWE	WIPO INFORMATION:	REF DOCUMENT NUMBER : 14894649 COUNTRY OF REF DOCUMENT : US

				ENTRY INTO NATIONAL PHASE	
WO14191272 A1	20151230	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015148850 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A

Title: PROCESS FOR PRODUCING HARDENING ACCELERATORS FOR MINERAL BINDER COMPOSITIONS

Abstract: Source: US2014305345A A process for preparing a setting and hardening accelerator for mineral binders includes the following steps: a) reacting a calcium compound CV with a silicon compound SV, and b) adding an acidic compound having a molecular weight of not more than 200 g/mol, more particularly 40-100 g/mol.

Classifications:

International (IPC 8-9): C04B12/04 C04B22/08 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention);

C04B103/12 C04B103/14 (Advanced/Non-invention)

CPC: C04B22/085 C04B28/04 C04B28/02 C04B40/0039 C04B40/0042 C04B2103/12 C04B2103/14 C04B12/04 C04B24/04 C04B2103/20 C04B22/0086 C04B22/082

US: 1/1 106/713 106/728 106/819 106/823

Family:

Publication number	Publication date	Application number	Application date
CN103906720 A	20140702	CN201280052887	20121205
CN103906720 B	20161214	CN201280052887	20121205
CO6970585 A2	20140613	CO20140112302	20140526
EP2788300 A1	20141015	EP20120795001	20121205
RU2014114177 A	20160210	RU20140114177	20121205
RU2617852 C2	20170428	RU20140114177	20121205
US2014305345 AA	20141016	US20120360052	20121205
US9145335 BB	20150929	US20120360052	20121205
WO13083627 A1	20130613	WO2012EP74501	20121205

Priority:

EP20110191944 20111205 EP20120795001 20121205 WO2012EP74501 20121205

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): SIKA TECHNOLOGY AG

Inventor(s): (std): BUERGE CHRISTIAN ; KURZ CHRISTOPHE ; MAEDER GILBERT ; MARAZZANI BEAT ; WOMBACHER FRANZ

Inventor(s): CHRISTIAN BUERGE ; CHRISTOPHE KURZ ; FRANZ WOMBACHER ; GILBERT MAEDER ; BEAT MARAZZANI

Agent(s): ANDREA TOBOS MATEUS; SIKA PATENT ATTORNEYS; OLIFF PLC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN103906720 A	20140702	LSPB	+	published / reissued	
CN103906720 A	20140702	LSPB	+C06	PUBLICATION	
CN103906720 A	20161214	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103906720 B	20161214	LSGT	+	granted / extensions (spc, cpc, pte)	
CO6970585 A2	20140613	LSPB	+	published / reissued	
EP2788300 A1	20141015	LSPB	+	published / reissued	
EP2788300 A1	20141015	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140707
RU2014114177 A	20160210	LSPB	+	published / reissued	
RU2617852 C2	20170428	LSGT	+	granted / extensions (spc, cpc, pte)	
US2014305345 AA	20141016	LSPB	+	published / reissued	
US2014305345 AA	20140522	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WOMBACHER, FRANZ; MARAZZANI, BEAT; BURGE, CHRISTIAN; AND OTHERS; SIGNING DATES FROM 20140328 TO 20140331; REEL/FRAME:032948/0995

US9145335 BB	20150929	LSGT	+	granted / extensions (spc, cpc, pte)	
US9145335 BB	20150909	LSGT	PAT1	Patented Case	
WO13083627 A1	20130613	LSPB	+	published / reissued	
WO13083627 A1	20140522	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14360052 COUNTRY OF REF DOCUMENT : US
WO13083627 A1	20140605	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13083627 A1	20140707	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014114177 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13083627 A1	20170502	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112014009938 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20140425

Title: ACCELERATING ADMIXTURE FOR CEMENTITIOUS COMPOSITIONS

Abstract: Source: US2016318802A The present invention describes a hardening accelerating admixture for hydraulic binders, the accelerator being based on transition metal silicate hydrates having the general formula: $a\text{Me}x\text{O}_y\text{bMOcAl}_2\text{O}_3\text{SiO}_2\text{dH}_2\text{O}$ 1) where -Me represents a transition metal whose molar coefficient a is in a range between 0.001 and 2, preferably between 0.01 and 1; -M represents an alkaline earth metal whose molar coefficient b is in a range between 0 and 2, preferably between 0.3 and 1.6; -The molar coefficient c for Al_2O_3 is in a range between 0 and 2, preferably between 0.1 and 1; -H₂O represents the hydration water of the silicate hydrate whose molar coefficient d can vary within a wide range between 0.5 and 20; x and y can both be equal to 1 or different, depending on the valence of the transition metal, given that the valence of the oxygen atom in the metal oxide is equal to 2.

Classifications:

International (IPC 8-9): C04B14/28 C04B18/08 C04B18/14

C04B22/00 C04B22/06 C04B22/08 C04B24/04 C04B24/12

C04B24/24 C04B24/26 C04B24/32 C04B28/02 C04B28/04

C04B28/18 C04B40/00 C04B7/02 C08G65/333

C08G65/335 (Advanced/Invention);

C04B103/00 C04B103/12 C04B103/14 C04B103/40 (Advanced/Non-invention)

CPC: C04B24/2647 C04B22/0093 C04B24/246 C04B14/28 C04B7/02

C08G65/3353 C08G65/33306 C04B2103/0053 C04B2103/12

C04B2103/408 C04B28/04 C04B2103/14 C04B28/18 C04B40/0039

Y02W30/92 Y02W30/94 C04B14/043 C04B20/026 C04B22/0086

C04B14/042 C04B24/243 C04B2103/0014 C04B2103/0016

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C04B20/008 C04B2103/0088

US: 524/5

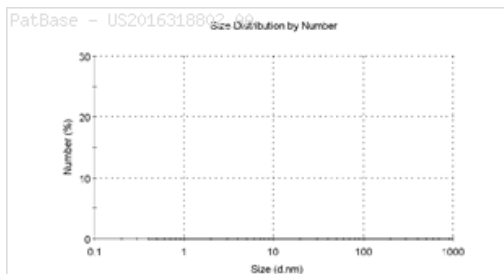


Figure 1. Particle-size distribution of the Cu-S-H dispersion of Example 1, before the high-pressure homogenization treatment. No particles with a diameter below 1,000 nm are observed.

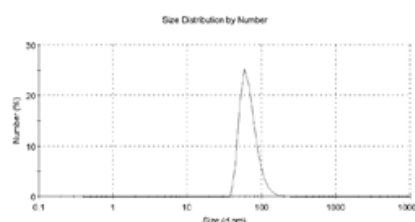


Figure 2. Particle-size distribution of the Cu-S-H dispersion of Example 2, after the high-pressure homogenization treatment.

Family:

Publication number	Publication date	Application number	Application date
AU2014363778 AA	20150618	AU20140363778	20141205
CA2933109 AA	20160608	CA20142933109	20141205
EP3080052 A1	20161019	EP20140820764	20141205
ITMI20132059 A1	20150611	IT2013MI02059	20131210
JP2016539906 T2	20161222	JP20160537549T	20141205
US2016318802 AA	20161103	US20140102635	20141205
US9617185 BB	20170411	US20140102635	20141205
WO15086453 A1	20150618	WO2014EP76708	20141205

Priority:

IT2013MI02059 20131210 WO2014EP76708 20141205

Probable Assignee: MAPEI SPA

Assignee(s): (std): MAPEI SPA

Assignee(s): RUSSO VINCENZO ; SQUINZI MARCO ; FERRARI GIORGIO

Inventor(s): (std): FERRARI GIORGIO ; RUSSO VINCENZO ; SQUINZI MARCO

Agent(s): LORD AND CO; KIRBY EADES GALE BAKER; BIANCHETTI BRACCO MINOJA SRL; SILVIA SALVADORI PC; SILVIA; MINOJA FABRIZIO

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2014363778 AA	20150618	LSPB	+	published / reissued	
CA2933109 AA	20160608	LSPB	+	published / reissued	
EP3080052 A1	20161019	LSPB	+	published / reissued	
EP3080052 A1	20161019	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160606
ITMI20132059 A1	20150611	LSPB	+	published /	

JP2016539906 T2	20161222	LSPB	+	reissued	
US2016318802 AA	20161103	LSPB	+	published / reissued	
US2016318802 AA	20160729	LSAS	AS	ASSIGNMENT	OWNER NAME : MAPEI S.P.A., ITALY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:FERRARI, GIORGIO; RUSSO, VINCENZO; SQUINZI, MARCO; SIGNING DATES FROM 20160714 TO 20160726; REEL/FRA:039286/0975
US9617185 BB	20170411	LSGT	+	granted / extensions (spc, cpc, pte)	
US9617185 BB	20170322	LSGT	PAT1	Patented Case	
WO15086453 A1	20150618	LSPB	+	published / reissued	
WO15086453 A1	20160608	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2933109 COUNTRY OF REF DOCUMENT : CA
WO15086453 A1	20160608	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016537549 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15086453 A1	20160608	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15102635 COUNTRY OF REF DOCUMENT : US
WO15086453 A1	20160610	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15086453 A1	20160630	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014363778 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20141205 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

Title: METHOD FOR THE PRODUCTION OF SOLID ACCELERATORS FOR CONSTRUCTION MATERIAL MIXTURES

Abstract: Source: US2015148456A The present invention relates to a process for producing solid compositions comprising calcium silicate hydrate and at least one water-soluble polymer with cationic structural units, uncharged structural units and/or anionic structural units containing sulpho groups, wherein an aqueous suspension of the calcium silicate hydrate is contacted with the polymer and the mixture is dried by a drum drying process. /

Classifications:

International (IPC 8-9): C04B22/00 C04B28/02 C04B28/04 C04B28/06 C04B28/08 C04B28/14 C04B40/00 C08K3/34 (Advanced/Invention)

CPC: C04B28/04 C04B28/06 C04B28/08 C04B28/14 C04B40/0039 C04B2103/0049 C04B2103/14 C04B2103/52 C04B40/0042 C08K3/34 C04B22/00 C04B28/02

US: 524/2 524/456

Family:

Publication number	Publication date	Application number	Application date
CN104350023 A	20150211	CN201380027922	20130527
CN104350023 B	20170222	CN201380027922	20130527
EP2855392 A1	20150408	EP20130725942	20130527
US2015148456 AA	20150528	US20130402477	20130527
WO13178560 A1	20131205	WO2013EP60817	20130527

Priority:

EP20120169845 20120529 EP20130725942 20130527 US20120652364P 20120529
WO2013EP60817 20130527 US20130402477 20130527

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): CONSTR RES AND TECH GMBH

Assignee(s): CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH ; COOPER TECHNOLOGIES CO

Inventor(s): (std): EISSMANN DIANA ; EISSMANN DIANA ; FRIEDRICH STEFAN ; HESSE CHRISTOPH ; LANGLOTZ JUTTA KARIN

Agent(s): RIEDL PETER

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN104350023 A	20150211	LSPB	+	published / reissued	
CN104350023 A	20150211	LSPB	+C06	PUBLICATION	
CN104350023 A	20170222	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN104350023 B	20170222	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2855392 A1	20150408	LSPB	+	published / reissued	
EP2855392 A1	20150408	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150105
US2015148456 AA	20150528	LSPB	+	published / reissued	
US2015148456 AA	20150219	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:EISSMANN, DIANA; LANGLOTZ, JUTTA KARIN; FRIEDRICH, STEFAN; AND OTHERS; SIGNING DATES FROM 20141211 TO 20150131; REEL/FRAME:034984/0784
US2015148456 AA	20150619	LSAS	AS	ASSIGNMENT	OWNER NAME : COOPER TECHNOLOGIES COMPANY, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GIBBS, ANTHONY RYAN; REEL/FRAME:035867/0289 EFFECTIVE DATE : 20150501
US2015148456 AA	20170125	LSRV	-FRM1	Final Rejection Mailed	
WO13178560 A1	20131205	LSPB	+	published /	

WO13178560 A1	20141120	LSNP	+WWE	reissued	
				WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14402477 COUNTRY OF REF DOCUMENT : US
WO13178560 A1	20141201	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: HYDRAULIC BINDER SETTING AND CURING ACCELERATOR AND CEMENT COMPOSITION CONTAINING SAID ACCELERATOR

Abstract: Hydraulic binder setting and curing accelerator comprising the following content by weight: degrees 25 to 35 percent of at least one sulfoaluminate clinker, - 45 to 55 percent of at least one sulphate source with a solubility higher than 4 g. L-1 in water at 20 degrees centigrade, and degrees 10 to 20 percent of at least one sulphate source with a solubility of less than 4 g.L-1 in water at 20 degrees centigrade, said clinker containing calcium aluminate-type mineralogical compounds. The cement composition containing said setting and curing accelerator can be used at temperatures of 5 degrees centigrade to 35 degrees centigrade, and to obtain a sprayed concrete or a grouting or bedding mortar with enhanced mechanical compression strength.

Classifications:

International (IPC 8-9): C04B22/00 C04B28/04 C04B28/16 C04B40/00 (Advanced/Invention); C04B103/12 C04B103/14 C04B111/70 (Advanced/Non-invention)

International (IPC 1-7): C04B103/12 C04B22/00 C04B28/04 C04B28/16 C04B40/0039

CPC: C04B28/16 C04B2103/12 C04B2103/14 C04B2111/00155 C04B2111/70 C04B28/04 C04B40/0039

Family:

Publication number	Publication date	Application number	Application date
BE1020896 AD	20140701	BE20130000841	20131216
BG111998 A	20161031	BG20150111998	20150429
ES2546052 AB	20150917	ES20150090039	20131216
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FR2999564 A1	20140620	FR20120062227	20121218
FR2999564 B1	20160226	FR20120062227	20121218
GR1008452 B	20150319	GR20130100697	20131216
GR20130100697 A	20140718	GR20130100697	20131216
ITMI20132100 A1	20140619	IT2013MI02100	20131216
WO14096650 A1	20140626	WO2013FR53086	20131216

Priority:

FR20120062227 20121218 WO2013FR53086 20131216

Probable Assignee: FRANCAIS CEMENTS

Assignee(s): (std): FRANCAIS CEMENTS

Assignee(s): CEMENTS FRANCAIS

Inventor(s): (std): GRELAUD JEAN PIERRE ; LE ROLLAND BRUNO ; ROLLAND BRUNO ; SOTH RATANA ; SOTH RATATA

Inventor(s): BRUNO LE ROLLAND ; RATANA SOTH ; JEAN PIERRE GRELAUD

Agent(s): DE ELZABURU ALBERTO; IPSILON BREMA LOYER; LE CLOIREC CLAUDINE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
BE1020896 AD	20140701	LSPB	+	published / reissued	
BG111998 A	20161031	LSPB	+	published / reissued	
ES2546052 AB	20150917	LSPB	+	published / reissued	
ES2546052 BA	20160823	LSGT	+	granted / extensions (spc, cpc, pte)	
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FR2999564 A1	20151221	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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ITMI20132100 A1	20140619	LSPB	+	published / reissued	
WO14096650 A1	20140626	LSPB	+	published / reissued	
WO14096650 A1	20150618	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

WO14096650 A1	20160511	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13824610 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
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Title: TERNESITE USED AS AN ADDITIVE IN PORTLAND CEMENT

Abstract: Source: US2014230696A The present invention relates to the production of ternesite clinkers containing 20 to 100 percent by weight C5S2\$ and less than 15 percent by weight C4A3\$, and to the use of ternesite as an additive to Portland cement or Portland composite cement, and to a binder containing 20 to 95 percent by weight Portland cement (clinker) and 80 to 5 percent by weight ternesite (clinker).

Classifications:

International (IPC 8-9): C04B16/04 C04B22/00 C04B22/14 C04B28/02 C04B28/04 C04B28/06 C04B28/08 C04B40/00 C04B7/00 C04B7/02 C04B7/13 C04B7/153 C04B7/24 C04B7/26 C04B7/28 C04B7/32 C04B7/345 C04B7/38 C04B7/44 C04B7/52 (Advanced/Invention); C04B103/14 C04B111/00 (Advanced/Non-invention); C04B40/00 C04B7/32 (Core/Invention); C04B (Subclass/Invention)

CPC: C04B7/13 C04B7/153 C04B7/24 C04B2103/10 C04B7/3453 C04B14/106 C04B14/303 C04B22/06 C04B22/085 C04B22/10 C04B22/124 C04B22/148 C04B24/045 Y02P40/143 Y02P40/145 C04B7/02 C04B7/26 C04B7/28 C04B16/04 C04B22/0093 C04B22/14 C04B28/02 C04B28/021 C04B7/323 C04B7/326 C04B7/345 C04B28/04 C04B28/065 C04B28/08 C04B40/0039 C04B2103/14 C04B2111/00017 C04B2111/00767 Y02W30/91 Y02P40/148

US: 1/1 106/606 106/638 106/643 106/692 106/693 106/695 106/705 106/706 106/709 106/713 106/714 106/716 106/718 106/724 106/733 106/735 106/736 106/739 106/763 106/765 106/767 106/783 106/789 106/798 106/801 106/802 106/810 106/811 106/814 106/815 106/819 106/823 524/2

PatBase - US2014230696_AA

FIG. 1: Heat flow of the hardened cement pastes Aqu-K and Aqu-K-T_{pur}

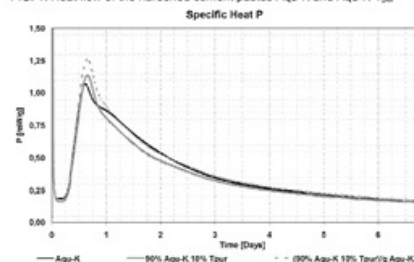
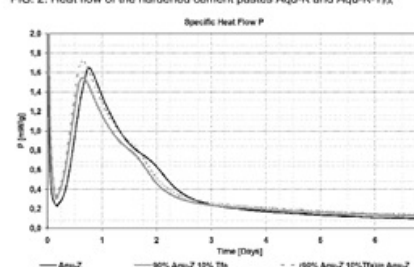


FIG. 2: Heat flow of the hardened cement pastes Aqu-K and Aqu-K-T_{FA}



Family:

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EP2617692 A1	20130724	EP20120003718	20120510
EP2636654 A1	20130911	EP20120001488	20120305
EP2644577 A1	20131002	EP20120002111	20120326
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EP2744765 B1	20160420	EP20120735470	20120716
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HR20160742 T1	20160729	HR20160000742	20160627
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HU028371 T2	20161228	HU20120735790T	20120716
HU030286 T2	20170428	HU20120735470T	20120716
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IN01809DN2014 A	20150515	IN2014DN01809	20140310
IN01810DN2014 A	20150515	IN2014DN01810	20140310
IN01811DN2014 A	20150515	IN2014DN01811	20140310
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JP5997274 B2	20160928	JP20140525336T	20120716
KR20140064828 A	20140528	KR20147005708	20120716
KR20140066714 A	20140602	KR20147005709	20120716
MX2014001184 A1	20150127	MX20140001184	20120716
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UA109346 C2	20150810	UA20140002669	20120716
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ZA201401134 A	20150429	ZA20140001134	20140214

Priority:

EP20110006757	20110818	EP20110008570	20111026	EP20120001488	20120305
EP20120002111	20120326	EP20120002342	20120330	EP20120003718	20120510
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Probable Assignee: HEIDELBERGCEMENT AG

Assignee(s): (std): BATOG BARBARA ; BEN HAH MOHSEN ; BULLERJAHN FRANK ; HEIDELBERGCEMENT AG ; SCHMITT DIRK ; IRBE LINDA ; ZAJAC MACIEJ ; BULLERJHAN FRANK ; HAH MOHSEN BEN

Inventor(s): (std): BARBARA BATOG ; BATOG BARBARA ; BEN HAH MOHSEN ; BEN HAH MOHSIN ; BULLERJAHN FRANK ; BULLERJHAN FRANK ; DIRK SCHMITT ; FRANK BULLERJAHN ; HAH MOHSEN BEN ; IRBE LINDA ; LINDA IRBE ; MACIEJ ZAJAC ; MOHSEN BEN HAH ; MOHSIN BEN HAH ; SCHMID DIRK ; SCHMITT DIRK ; ZAJAC MACIEJ

Agent(s): GRIFFITH HACK; MARKS AND CLERK; ZELLENTIN AND PARTNER GBR; ZELLENTIN AND PARTNER MBB PATENTANWAELTE; Wagner Jutta; WAGNER JUTTA; PATENTANWAELTE ZELLENTIN AND PARTNER; LEHMANN MARIA ISABEL; FULYA SUEMERALP; PAUL D; STRAIN AND STRAIN PLLC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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AR087587 AA	20140403	LSPB	+	published / reissued	
AR088427 AA	20140611	LSPB	+	published / reissued	
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EP2617691 A1	20140618	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SCHMITT, DIRK
EP2617691 A1	20140618	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BEN HAHA, MOHSEN
EP2617691 A1	20140618	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BATOG, BARBARA
EP2617691 A1	20140618	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BULLERJAHN, FRANK
EP2617691 A1	20170329	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20170223
EP2617692 A1	20130724	LSPB	+	published / reissued	
EP2617692 A1	20130724	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20121114
EP2617692 A1	20170322	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20170217
EP2636654 A1	20130911	LSPB	+	published / reissued	
EP2636654 A1	20140917	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20140312
EP2644577 A1	20131002	LSPB	+	published / reissued	
EP2644577 A1	20140924	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20140403
EP2744765 A2	20140625	LSPB	+	published / reissued	
EP2744765 A2	20140625	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140123
EP2744765 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : IRBE, LINDA
EP2744765 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BEN HAHA, MOHSEN
EP2744765 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BULLERJAHN, FRANK
EP2744765 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BATOG, BARBARA
EP2744765 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SCHMITT, DIRK
EP2744765 A2	20151209	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20151113
EP2744765 A2	20160420	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2744765 A2	20160429	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2744765 A2	20160515	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 792260 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160515
EP2744765 A2	20160518	LSGT	REG	REFERENCE TO A	REF COUNTRY CODE : IE

				NATIONAL CODE	REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT: GERMAN
EP2744765 A2	20160602	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 502012006813 COUNTRY OF REF DOCUMENT : DE
EP2744765 A2	20160719	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE
EP2744765 A2	20160722	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 5
EP2744765 A2	20160822	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20160420
EP2744765 A2	20160825	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2744765 A2	20160906	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2581502 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20160906
EP2744765 A2	20160930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160420
EP2744765 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160420
EP2744765 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160805 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NO PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160726 YEAR OF FEE PAYMENT : 5

EP2744765 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BG PAYMENT DATE : 20160728 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160420
EP2744765 A2	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160420
EP2744765 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20160711 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GR PAYMENT DATE : 20160727 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20160714 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20160706 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20160707 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20160701 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : HR PAYMENT DATE : 20160707 YEAR OF FEE PAYMENT : 5
EP2744765 A2	20170123	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 502012006813 COUNTRY OF REF DOCUMENT : DE
EP2744765 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE

EP2744765 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	PRESCRIBED TIME-LIMIT LAPSED DATE : 20160420 COUNTRY OF REF DOCUMENT : EE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160420
EP2744765 A2	20170202	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20160401661 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20161020
EP2744765 A2	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SM NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160420
EP2744765 A2	20170329	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20170123
EP2744765 A2	20170331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160420
EP2744765 A2	20170503	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2744765 B1	20160420	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2744766 A2	20140625	LSPB	+	published / reissued	
EP2744766 A2	20140625	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140318
EP2744766 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : ZAJAC, MACIEJ
EP2744766 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BATOG, BARBARA
EP2744766 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SCHMITT, DIRK
EP2744766 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BEN HAH, MOHSEN
EP2744766 A2	20140709	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BULLERJAHN, FRANK
EP2744766 A2	20150826	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20150722
EP2744766 A2	20160302	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160203
EP2744766 A2	20160727	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160627
EP2744766 A2	20160817	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2744766 A2	20160831	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2744766 A2	20160907	LSGT	REG	REFERENCE TO A	REF COUNTRY CODE : IE

				NATIONAL CODE	REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT : GERMAN
EP2744766 A2	20160915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 820883 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160915
EP2744766 A2	20160929	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 502012007986 COUNTRY OF REF DOCUMENT : DE
EP2744766 A2	20161227	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2744766 A2	20170109	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20160817
EP2744766 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817
EP2744766 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817
EP2744766 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817
EP2744766 A2	20170217	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2602154 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20170217
EP2744766 A2	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817
EP2744766 A2	20170302	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20160402779 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20170130
EP2744766 A2	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817

EP2744766 B1	20160817	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2744767 A2	20140625	LSPB	+	published / reissued	
EP2744767 A2	20140625	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140318
EP2744767 A2	20151202	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20151106
EP2744767 A2	20160406	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2744767 A2	20160415	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2744767 A2	20160415	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 787624 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160415
EP2744767 A2	20160504	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT: GERMAN
EP2744767 A2	20160519	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 502012006617 COUNTRY OF REF DOCUMENT : DE
EP2744767 A2	20160629	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE
EP2744767 A2	20160721	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2578164 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20160721
EP2744767 A2	20160722	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 5
EP2744767 A2	20160810	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2744767 A2	20160815	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20160406
EP2744767 A2	20160930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744767 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406

EP2744767 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160806
EP2744767 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160726 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BG PAYMENT DATE : 20160728 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NO PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160728 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744767 A2	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744767 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20160707 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20160711 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20160706 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID	COUNTRY OF REF DOCUMENT : GR

				TO NATIONAL OFFICE	PAYMENT DATE : 20160727 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20160714 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : HU PAYMENT DATE : 20160704 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161228	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HU REF LEGAL EVENT CODE : AG4A REF DOCUMENT NUMBER : E028369 COUNTRY OF REF DOCUMENT : HU
EP2744767 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : HR PAYMENT DATE : 20160705 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20160712 YEAR OF FEE PAYMENT : 5
EP2744767 A2	20170110	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 502012006617 COUNTRY OF REF DOCUMENT : DE
EP2744767 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744767 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744767 A2	20170202	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20160401416 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20160906
EP2744767 A2	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SM NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744767 A2	20170315	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20170110
EP2744767 A2	20170331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE

					PREScribed TIME-LIMIT LAPSED DATE : 20160406
EP2744767 A2	20170503	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2744767 B1	20160406	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2744768 A2	20140625	LSPB	+	published / reissued	
EP2744768 A2	20140625	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140318
EP2744768 A2	20151202	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20151106
EP2744768 A2	20160406	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2744768 A2	20160415	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2744768 A2	20160415	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 787625 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160415
EP2744768 A2	20160504	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT: GERMAN
EP2744768 A2	20160519	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 502012006619 COUNTRY OF REF DOCUMENT : DE
EP2744768 A2	20160706	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE
EP2744768 A2	20160722	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 5
EP2744768 A2	20160810	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2744768 A2	20160812	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2579610 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20160812
EP2744768 A2	20160815	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20160406
EP2744768 A2	20160930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PREScribed TIME-LIMIT LAPSED DATE : 20160406
EP2744768 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING	COUNTRY OF REF DOCUMENT : IS

				STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160806
EP2744768 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744768 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160726 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BG PAYMENT DATE : 20160728 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NO PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160728 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744768 A2	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744768 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GR PAYMENT DATE : 20160727 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : HU PAYMENT DATE : 20160704 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20160714 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161130	LSFE	+PGFP	POSTGRANT:	COUNTRY OF REF DOCUMENT :

				ANNUAL FEES PAID TO NATIONAL OFFICE	PL PAYMENT DATE : 20160711 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20160706 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20160707 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161228	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HU REF LEGAL EVENT CODE : AG4A REF DOCUMENT NUMBER : E028371 COUNTRY OF REF DOCUMENT : HU
EP2744768 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20160721 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160722 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : HR PAYMENT DATE : 20160705 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20160712 YEAR OF FEE PAYMENT : 5
EP2744768 A2	20170110	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 502012006619 COUNTRY OF REF DOCUMENT : DE
EP2744768 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744768 A2	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744768 A2	20170202	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20160401453 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20160906
EP2744768 A2	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SM NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744768 A2	20170315	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20170110
EP2744768 A2	20170331	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT :

				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	MC NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160406
EP2744768 A2	20170503	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2744768 B1	20160406	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2578164 T3	20160721	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2579610 T3	20160812	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2581502 T3	20160906	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2602154 T3	20170217	LSGT	+	granted / extensions (spc, cpc, pte)	
HR20160664 T1	20160812	LSPB	+	published / reissued	
HR20160665 T1	20160729	LSPB	+	published / reissued	
HR20160742 T1	20160729	LSPB	+	published / reissued	
HU028369 T2	20161228	LSPB	+	published / reissued	
HU028371 T2	20161228	LSPB	+	published / reissued	
HU030286 T2	20170428	LSPB	+	published / reissued	
IN01798DN2014 A	20160429	LSPB	+	published / reissued	
IN01799DN2014 A	20150515	LSPB	+	published / reissued	
IN01800DN2014 A	20150515	LSPB	+	published / reissued	
IN01809DN2014 A	20150515	LSPB	+	published / reissued	
IN01810DN2014 A	20150515	LSPB	+	published / reissued	
IN01811DN2014 A	20150515	LSPB	+	published / reissued	
JP2014525890 T2	20141002	LSPB	+	published / reissued	
JP2014525890 T2	20150312	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150311
JP2014525890 T2	20150909	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150909
JP2014525890 T2	20160303	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20160302
JP2014525890 T2	20160630	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160630
JP2014525890 T2	20160712	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20160711
JP2014525890 T2	20160728	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014525890 T2	20160803	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20160803

(UTILITY MODEL)					
JP2014525890 T2	20160901	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20160825
JP2014527014 T2	20141009	LSPB	+	published / reissued	
JP2014527014 T2	20150305	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150304
JP2014527014 T2	20150902	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150902
JP2014527014 T2	20151008	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20151007
JP2014527014 T2	20160405	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160405
JP2014527014 T2	20160425	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2014527014 T2	20160427	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20160427
JP2014527014 T2	20160512	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20160506
JP2017019712 A2	20170126	LSPB	+	published / reissued	
JP5934359 B2	20160615	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5997274 B2	20160928	LSGT	+	granted / extensions (spc, cpc, pte)	
KR20140064828 A	20140528	LSPB	+	published / reissued	
KR20140066714 A	20140602	LSPB	+	published / reissued	
MX2014001184 A1	20150127	LSPB	+	published / reissued	
MX2014001752 A1	20140826	LSPB	+	published / reissued	
PL2744765 T3	20161031	LSGT	+	granted / extensions (spc, cpc, pte)	
PL2744767 T3	20161031	LSGT	+	granted / extensions (spc, cpc, pte)	
PL2744768 T3	20161031	LSGT	+	granted / extensions (spc, cpc, pte)	
PT2744765 T	20160718	LSGT	+	granted / extensions (spc, cpc, pte)	
PT2744766 T	20161124	LSGT	+	granted / extensions (spc, cpc, pte)	
PT2744767 T	20160713	LSGT	+	granted / extensions (spc, cpc, pte)	
PT2744768 T	20160713	LSGT	+	granted / extensions (spc, cpc, pte)	
TH151435 A	20160531	LSPB	+	published / reissued	
TH151436 A	20160531	LSPB	+	published / reissued	
TR201616217 T4	20161221	LSGT	+	granted / extensions (spc, cpc, pte)	

UA107770 C2	20150210	LSGT	+	granted / extensions (spc, cpc, pte)	
UA109346 C2	20150810	LSGT	+	granted / extensions (spc, cpc, pte)	
UA110991 C2	20160310	LSGT	+	granted / extensions (spc, cpc, pte)	
UA111222 C2	20160411	LSGT	+	granted / extensions (spc, cpc, pte)	
UA111374 C2	20160425	LSGT	+	granted / extensions (spc, cpc, pte)	
UA111375 C2	20160425	LSGT	+	granted / extensions (spc, cpc, pte)	
US2014230696 AA	20140821	LSPB	+	published / reissued	
US2014230696 AA	20140429	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BULLERJAHN, FRANK; SCHMITT, DIRK; BEN HAHA, MOHSEN; AND OTHERS; SIGNING DATES FROM 20140207 TO 20140219; REEL/FRAME:032776/0261
US2014230697 AA	20140821	LSPB	+	published / reissued	
US2014230697 AA	20140429	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BULLERJAHN, FRANK; SCHMITT, DIRK; BEN HAHA, MOHSEN; AND OTHERS; SIGNING DATES FROM 20140124 TO 20140207; REEL/FRAME:032776/0570
US2014230699 AA	20140821	LSPB	+	published / reissued	
US2014230699 AA	20140429	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BULLERJAHN, FRANK; SCHMITT, DIRK; BEN HAHA, MOHSEN; REEL/FRAME:032777/0458 EFFECTIVE DATE : 20140219
US2014238274 AA	20140828	LSPB	+	published / reissued	
US2014238274 AA	20140331	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BULLERJAHN, FRANK; SCHMITT, DIRK; BEN HAHA, MOHSEN; REEL/FRAME:032562/0498 EFFECTIVE DATE : 20140219
US2014261088 AA	20140918	LSPB	+	published / reissued	
US2014261088 AA	20140523	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BULLERJAHN, FRANK; SCHMITT, DIRK; BEN HAHA, MOHSEN; AND OTHERS; SIGNING DATES FROM 20140207 TO 20140219; REEL/FRAME:032953/0824
US2014283712 AA	20140925	LSPB	+	published / reissued	
US2014283712 AA	20140429	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT

OF ASSIGNORS INTEREST;
 ASSIGNORS:BULLERJAHN,
 FRANK; SCHMITT, DIRK; BEN
 HAHN, MOHSEN;
 REEL/FRAME:032776/0029
 EFFECTIVE DATE : 20140219

US9067825 BB	20150630	LSGT	+	granted / extensions (spc, cpc, pte)	
US9067825 BB	20150610	LSGT	PAT1	Patented Case	
US9067826 BB	20150630	LSGT	+	granted / extensions (spc, cpc, pte)	
US9067826 BB	20150610	LSGT	PAT1	Patented Case	
US9073784 BB	20150707	LSGT	+	granted / extensions (spc, cpc, pte)	
US9073784 BB	20150617	LSGT	PAT1	Patented Case	
US9073785 BB	20150707	LSGT	+	granted / extensions (spc, cpc, pte)	
US9073785 BB	20150617	LSGT	PAT1	Patented Case	
US9212091 BB	20151215	LSGT	+	granted / extensions (spc, cpc, pte)	
US9212091 BB	20151124	LSGT	PAT1	Patented Case	
US9302940 BB	20160405	LSGT	+	granted / extensions (spc, cpc, pte)	
US9302940 BB	20160304	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
WO13023727 A2	20130221	LSPB	+	published / reissued	
WO13023727 A3	20140206	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2844471 COUNTRY OF REF DOCUMENT : CA
WO13023727 A3	20140213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012297242 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120716 KIND CODE OF REF DOCUMENT : A
WO13023727 A3	20140218	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13023727 A3	20140429	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14239319 COUNTRY OF REF DOCUMENT : US
WO13023728 A2	20130221	LSPB	+	published / reissued	
WO13023728 A2	20140206	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2844485 COUNTRY OF REF DOCUMENT : CA
WO13023728 A2	20140213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012297243 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120716 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13023728 A2	20140218	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13023728 A2	20140317	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : A201402673 COUNTRY OF REF DOCUMENT : UA
WO13023728 A2	20140429	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14239339 COUNTRY OF REF DOCUMENT : US

WO13023729 A2	20130221	LSPB	+	published / reissued	
WO13023729 A2	20140206	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2844383 COUNTRY OF REF DOCUMENT : CA
WO13023729 A2	20140213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012297244 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120716 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13023729 A2	20140216	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : P149/2014 COUNTRY OF REF DOCUMENT : AE
WO13023729 A2	20140217	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014525335 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13023729 A2	20140218	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13023729 A2	20140303	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20147005709 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13023729 A2	20140429	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14239348 COUNTRY OF REF DOCUMENT : US
WO13023729 A2	20170314	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112014003590 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20140217
WO13023730 A2	20130221	LSPB	+	published / reissued	
WO13023730 A3	20140206	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2844389 COUNTRY OF REF DOCUMENT : CA
WO13023730 A3	20140213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012297245 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120716 KIND CODE OF REF DOCUMENT : A
WO13023730 A3	20140218	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13023730 A3	20140317	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : A201402671 COUNTRY OF REF DOCUMENT : UA
WO13023730 A3	20140321	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14238976 COUNTRY OF REF DOCUMENT : US
WO13023730 A3	20140924	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12737210 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2

WO13023731 A2	20130221	LSPB	+	published / reissued	
WO13023731 A2	20140206	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2844391 COUNTRY OF REF DOCUMENT : CA
WO13023731 A2	20140213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012297246 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120716 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13023731 A2	20140216	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : P151/2014 COUNTRY OF REF DOCUMENT : AE
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WO13023731 A2	20140218	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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WO13023732 A2	20130221	LSPB	+	published / reissued	
WO13023732 A3	20140206	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2844395 COUNTRY OF REF DOCUMENT : CA
WO13023732 A3	20140213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012297247 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120716 KIND CODE OF REF DOCUMENT : A
WO13023732 A3	20140218	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13023732 A3	20140317	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : A201402665 COUNTRY OF REF DOCUMENT : UA
WO13023732 A3	20140523	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14238947 COUNTRY OF REF DOCUMENT : US
WO13023732 A3	20140917	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12735473 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2
ZA201401134 A	20150429	LSGT	+	granted / extensions (spc,	

Title: HARDENING-ACCELERATOR AND A METHOD FOR ACCELERATING THE HARDENING OF HYDRAULIC BINDERS AND MIXTURES THEREOF

Abstract: Described herein is a novel hardening accelerator including at least one inorganic thiocyanate, at least one alkanolamine, at least one organic polyol and optionally water that accelerates the hardening of hydraulic binders containing Portland cement and in particular Portland cement with a high level of fly ash. Also described herein is a method for accelerating the hardening of hydraulic binders or mixtures containing the hydraulic binders.

Classifications:

International (IPC 8-9): C04B22/14 C04B24/02 C04B24/12 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B40/0039 C04B28/02 C04B28/04 C04B2103/12 C04B2103/14 C04B2111/1062 Y02W30/92

PatBase - WO13066192_A1

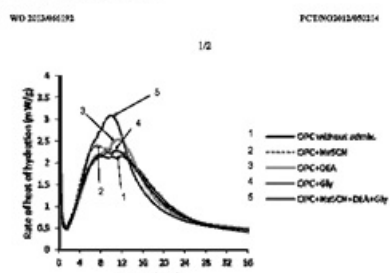


Figure 1

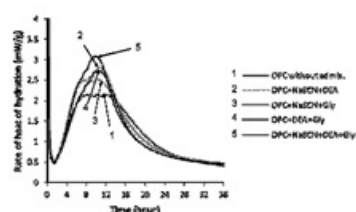


Figure 2

Family:

Publication number	Publication date	Application number	Application date
NO20111524 A	20130506	NO20110001524	20111104
WO13066192 A1	20130510	WO2012N050214	20121105

Priority:

NO20110001524 20111104

Probable Assignee: MAPEI AS

Assignee(s): (std): MAPEI AS

Inventor(s): (std): GEIKER METTE ; HOANG KIEN DINH ; JUSTNES HARALD ; MYRDAL ROAR ; RUDBERG ESPEN

Agent(s): BRYN AARFLOT AS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT HW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
NO20111524 A	20130506	LSPB	+	published / reissued	
NO20111524 A	20150126	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	
WO13066192 A1	20130510	LSPB	+	published / reissued	
WO13066192 A1	20140505	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13066192 A1	20141231	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 12799337 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: HARDENING ACCELERATOR COMPOSITION

Abstract: Source: US2015291474A The invention concerns a process for the preparation of a hardening accelerator composition by reaction of a water-soluble calcium compound with a water-soluble silicate compound, said reaction being carried out in the presence of an aqueous solution which contains a water-soluble comb polymer suitable as a plasticizer for hydraulic binders, wherein the water-soluble comb polymer is present as a copolymer which is produced by free radical polymerization in the presence of a phosphorylated monomer and a (meth)acrylic acid ester based polyether macromonomer.

Classifications:

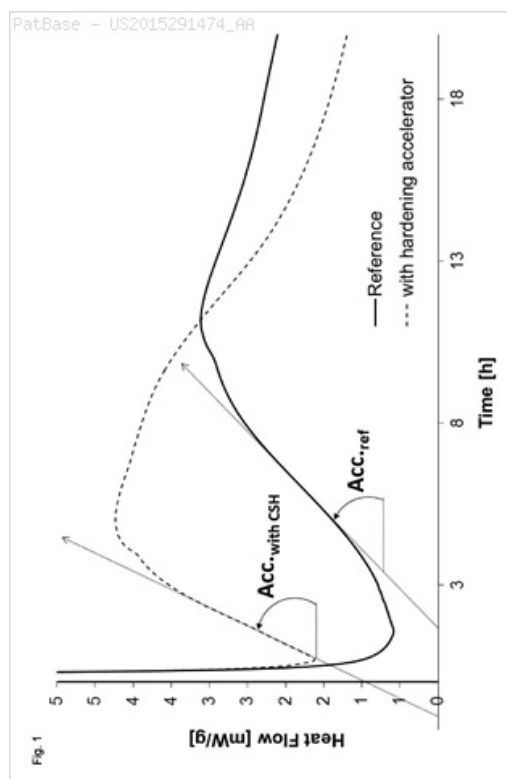
International (IPC 8-9): C04B103/14 C04B22/00 C04B22/06 C04B22/08 C04B22/10 C04B22/12 C04B22/14 C04B24/04 C04B24/26 C04B28/02 C04B40/00 C08F220/36 C08K3/00 (Advanced/Invention);

C04B103/14 (Advanced/Non-invention)

CPC: C04B22/00 C04B24/2641 C04B22/0086 C04B40/0039

C04B2103/14 C04B14/043 C04B24/246

US: 1/1 524/3 524/456

**Family:**

Publication number	Publication date	Application number	Application date
CN104718172 A	20150617	CN201380053150	20130812
CN104718172 B	20170308	CN201380053150	20130812
EP2882696 A1	20150617	EP20130750018	20130812
JP2015526376 T2	20150910	JP20150526951T	20130812
US2015291474 AA	20151015	US20130420465	20130812
US9388077 BB	20160712	US20130420465	20130812
WO14026938 A1	20140220	WO2013EP66776	20130812

Priority:

EP20120180201 20120813 EP20130750018 20130812 WO2013EP66776 20130812

Probable Assignee: CONSTR RES AND TECH GMBH

Assignee(s): (std): BASF SCHWEIZ AG ; CONSTR RES AND TECH GMBH

Assignee(s): CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Inventor(s): (std): GADT TORBEN ; GAEDT TORBEN ; GRASSL HARALD ; NICOLEAU LUC

Agent(s): SALVATORE A; JOSEPH G; CURATOLO SIDOTI CO LPA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN104718172 A	20150617	LSPB	+	published / reissued	
CN104718172 A	20150617	LSPB	+C06	PUBLICATION	
CN104718172 A	20170308	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN104718172 B	20170308	LSGT	+	granted / extensions	

EP2882696 A1	20150617	LSPB	+	(spc, cpc, pte) published / reissued	
EP2882696 A1	20150617	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150313
JP2015526376 T2	20150910	LSPB	+	published / reissued	
JP2015526376 T2	20160809	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20160809
US2015291474 AA	20151015	LSPB	+	published / reissued	
US2015291474 AA	20150319	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: NICOLEAU, LUC; GAEDT, TORBEN; GRASSL, HARALD; SIGNING DATES FROM 20150226 TO 20150227; REEL/FRA: 035201/0527
US9388077 BB	20160712	LSGT	+	granted / extensions (spc, cpc, pte)	
US9388077 BB	20160518	LSSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
WO14026938 A1	20140220	LSPB	+	published / reissued	
WO14026938 A1	20150209	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14420465 COUNTRY OF REF DOCUMENT : US
WO14026938 A1	20150213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015526951 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO14026938 A1	20150213	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: STABILIZED SOLIDIFICATION AND SETTING ACCELERATOR FOR HYDRAULIC BINDERS

Abstract: Source: US2017088464A A solidification and setting accelerator for hydraulic binders, in particular for shotcrete/gunite or sprayed mortar, comprises sulfate, aluminum and at least two chemically distinct organic acids, each of which contains at least one hydroxy group in addition to at least one acid group, the combined maximum content of the at least two organic acids being 1 wt percent in relation to the total weight of the accelerator.

Classifications:

International (IPC 8-9): C04B22/06 C04B22/14 C04B24/06 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B28/02 C04B2103/12 Y02W30/94 C04B22/148 C04B22/06 C04B22/066 C04B28/04 C04B40/0039 C04B2103/14 C04B2111/00146

Family:

Publication number	Publication date	Application number	Application date
AU2015260996 AA	20151119	AU20150260996	20150512
CA2948564 AA	20161109	CA20152948564	20150512
CN106573843 A	20170419	CN201580025192	20150512
EP3142989 A1	20170322	EP20150720350	20150512
US2017088464 AA	20170330	US20150311088	20150512
WO15173213 A1	20151119	WO2015EP60419	20150512

Priority:

EP20140168358 20140514 WO2015EP60419 20150512

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): SIKA TECH AG ; SIKA TECHNOLOGY AG

Assignee(s): STENGER CHRISTIAN

Inventor(s): (std): STENGER CHRISTIAN

Agent(s): WRAYS PTY LTD; BERESKIN AND PARR LLP SENCRL SRL; SIKA PATENT ATTORNEYS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2015260996 AA	20151119	LSPB	+	published / reissued	
CA2948564 AA	20161109	LSPB	+	published / reissued	
CN106573843 A	20170419	LSPB	+	published / reissued	
CN106573843 A	20170419	LSPB	PB01	PUBLICATION	
EP3142989 A1	20170322	LSPB	+	published / reissued	
EP3142989 A1	20170322	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20161214
US2017088464 AA	20170330	LSPB	+	published / reissued	
US2017088464 AA	20161114	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SIKA TECHNOLOGY AG, SWITZERLAND OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:STENGER, CHRISTIAN; REEL/FRAME:040615/0123 EFFECTIVE DATE : 20161111
US2017088464 AA	20170417	LSSES	NFA1	Non Final Action Mailed	
WO15173213 A1	20151119	LSPB	+	published / reissued	
WO15173213 A1	20161109	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2948564 COUNTRY OF REF DOCUMENT : CA
WO15173213 A1	20161114	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15173213 A1	20161114	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15311088 COUNTRY OF REF DOCUMENT : US

WO15173213 A1	20161201	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015260996 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20150512 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15173213 A1	20161214	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016143556 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

Title: ACCELERATOR FOR HYDRAULIC BINDING AGENTS WITH LONG PROCESSING TIME AND VERY EARLY STRENGTH

Abstract: Source: US2017073267A The present invention relates to an accelerator for hydraulic binding agents, comprising at least one phosphoric acid ester of a multivalent alcohol and at least one calcium compound. The accelerator according to the invention is capable of producing a very fast-curing mortar or concrete composition which has a high early strength and, nevertheless, very favourable processing properties and thus allows early dismantling or early loading and does not cause any losses in the final strength.

Classifications:

International (IPC 8-9): C04B24/00 C04B24/02 C04B24/32 C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B40/0042 C04B2103/10 C04B24/02 C04B24/32 C04B28/04 C04B2103/12 C04B24/003 C04B40/0039 C04B2103/0027 C04B2103/14 C04B2103/32

Family:

Publication number	Publication date	Application number	Application date
EP3145891 A1	20170329	EP20150724985	20150520
US2017073267 AA	20170316	US20150312298	20150520
WO15177232 A1	20151126	WO2015EP61152	20150520

Priority:

EP20140169313 20140521 WO2015EP61152 20150520

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): SIKA TECH AG ; SIKA TECHNOLOGY AG

Inventor(s): (std): BUERGE CHRISTIAN ; EBERHARDT ARND ; FRUNZ LUKAS ; GALLUCCI EMMANUEL ; JUILLAND PATRICK

Agent(s): SIKA PATENT ATTORNEYS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP3145891 A1	20170329	LSPB	+	published / reissued	
EP3145891 A1	20170329	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20161221
US2017073267 AA	20170316	LSPB	+	published / reissued	
US2017073267 AA	20170110	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SIKA TECHNOLOGY AG, SWITZERLAND OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GALLUCCI, EMMANUEL; JUILLAND, PATRICK; EBERHARDT, ARND; AND OTHERS; SIGNING DATES FROM 20161118 TO 20161121; REEL/FRAME:040931/0050
WO15177232 A1	20151126	LSPB	+	published / reissued	
WO15177232 A1	20161118	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15312298 COUNTRY OF REF DOCUMENT : US
WO15177232 A1	20161121	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: Chloride-free hardening accelerant for portland cement and process thereof

Abstract: Source: US4747877A This invention relates to a chloride-free hardening accelerant for Portland cement which is active in particular at low temperatures and contains calcium nitrate, sodium nitrate, hexamethylenetetramine and sodium hydroxide. The accelerant is prepared by reacting the calculated amount of formaldehyde with calcium ammonium nitrate in aqueous solution at between room temperature and 55 DEG C. under alkaline conditions established with sodium hydroxide. After the reaction had ended this solution can be used directly as such or be converted into a powder by means of a suitable drying operation.

Classifications:

International (IPC 8-9): C04B22/08 C04B28/04 C04B40/00 (Advanced/Invention);
C04B22/00 C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): C04B22/08 C04B24/02 C04B24/12 C04B28/04

CPC: C04B22/085 C04B28/04 C04B40/0039 C04B2103/14 C04B2111/1025 C04B2111/1062

European: C04B22/08B C04B28/04 C04B40/00D4 M04B103/14 M04B111/10C M04B111/10K

US: 106/727 106/808 106/823 106/90 524/6

Family:

Publication number	Publication date	Application number	Application date
CA1258474 A1	19890815	CA19860524533	19861204
DE3543874 A1	19870619	DE19853543874	19851212
US4747877 A	19880531	US19860940425	19861211

Priority:

CA19860524533 19861204 DE19853543874 19851212

Probable Assignee: SKW POLYMERS GMBH

Assignee(s): (std): BRAUN HANS RUDIGER ; SUEDDEUTSCHE KALKSTICKSTOFF

Assignee(s): SKW POLYMERS GMBH ; SKW TROSTBERG A CORP OF GERMANY AG ; SKW TROSTBERG AG

Inventor(s): (std): BRAUN HANS RUEDIGER DR ; BRAUN HANS RUEDIGER ; BRAUN HANS RUDIGER

Agent(s): BORDEN LADNER GERVAIS LLP

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA1258474 A1	19890815	LSPB	+	published / reissued	
CA1258474 A1	20061204	LSLE	-MKEX	EXPIRY	
DE3543874 A1	19870619	LSPB	+	published / reissued	
DE3543874 A1	19921112	LSSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE3543874 A1	19940609	LSLE	-8136	DISPOSAL/NON-PAYMENT OF THE FEE FOR PUBLICATION/GRANT	
US4747877 A	19880531	LSGT	+	granted / extensions (spc, cpc, pte)	
US4747877 A	19861211	LSAS	AS	ASSIGNMENT	OWNER NAME : SKW TROSTBERG AKTIENGESELLSCHAFT, POSTFACH 1150/11 DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR: BRAUN, HANS-RUEDIGER; REEL/FRAME: 004657/0441 EFFECTIVE DATE : 19861106
US4747877 A	19861211	LSAS	AS	ASSIGNMENT	OWNER NAME : SKW TROSTBERG AKTIENGESELLSCHAFT, A CORP. OF GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR: BRAUN, HANS-RUEDIGER; REEL/FRAME: 004657/0441 EFFECTIVE DATE : 19861106
US4747877 A	19861211	LSAS	AS	ASSIGNMENT	OWNER NAME : SKW TROSTBERG AKTIENGESELLSCHAFT, A CORP. OF GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR: BRAUN, HANS-RUEDIGER; US-ASSIGNMENT DATABASE UPDATED: 20100528; REEL/FRAME: 4657/441 EFFECTIVE DATE : 19861106
US4747877 A	19911018	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US4747877 A	19960602	LSLE	-LAPS	LAPSE FOR FAILURE	

				TO PAY MAINTENANCE FEES	
US4747877 A	19960813	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19960605

Title: STABLE SPRAYED CONCRETE ACCELERATOR DISPERSION HAVING A HIGH ACTIVE SUBSTANCE CONTENT

Abstract: Source: US2010003412A Accelerator for sprayed concrete or sprayed mortar, which is present as an aqueous dispersion which contains 25 to 40 percent by weight of aluminium sulphate and at least one further aluminium compound, so that the molar ratio of aluminium to sulphate in the dispersion is from 1.35 to 0.70, the aqueous dispersion having an inorganic stabilizer which comprises a magnesium silicate.

Classifications:

International (IPC 8-9): B05D3/10 C04B103/10 C04B22/00 C04B22/06 C04B22/08 C04B22/14 C04B24/04 C04B24/12 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention);
C04B103/10 (Advanced/Non-invention);
B05D3/10 C04B22/00 C04B28/00 C04B40/00 (Core/Invention);
C04B (Subclass/Invention)

International (IPC 1-7): C4B40/00

CPC: C04B22/148 C04B22/06 C04B24/122 C04B24/04 C04B28/04 C04B40/0039 C04B2103/12 C04B2111/00146

European: C04B40/00D4 M04B103/12 M04B111/00M16

US: 106/801 106/815 106/815S 106/819 106/819S 106/823 106/823S 427/337 427/337P

Family:

Publication number	Publication date	Application number	Application date
AT429410 E	20090515	AT20060014696T	20060714
AU2007272060 AA	20080117	AU20070272060	20070227
AU2007272060 BB	20100121	AU20070272060	20070227
BRPI0714400 A2	20130219	BR2007PI14400	20070227
CN101489958 A	20090722	CN200780026732	20070227
DE502006003540 D1	20090604	DE200650003540T	20060714
EP1878713 A1	20080116	EP20060014696	20060714
EP1878713 B1	20090422	EP20060014696	20060714
ES2323723 T3	20090723	ES20060014696T	20060714
HK1129655 A3	20091204	HK20090107602	20090818
IN00803CN2009 A	20090529	IN2009CN00803	20090211
MX2009000515 A1	20090127	MX20090000515	20070227
NO200900059 A	20090212	NO20090000059	20090106
NZ573909 A	20110225	NZ20070573909	20070227
PT1878713 T	20090525	PT20060014696T	20060714
TW200804223 A	20080116	TW20070109788	20070321
US2010003412 AA	20100107	US20070307893	20070227
US2016023950 AA	20160128	US20150872414	20151001
WO08006410 A1	20080117	WO2007EP01648	20070227
ZA200901031 A	20100428	ZA20090001031	20090213

Priority:

EP20060014696 20060714 US20090307893 20090708 WO2007EP01648 20070227
US20150872414 20151001

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): CONSTR RES AND TECH GMBH ; WEIBEL MARTIN

Assignee(s): CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Inventor(s): (std): WEIBEL MARTIN ; MARTIN WEIBEL

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; BOEHM THOMAS ET AL; CURATOLO SIDOTI CO LPA; CONSTRUCTION RESEARCH TECHNOLOGY GMBH

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT429410 E	20090515	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2007272060 AA	20080117	LSPB	+	published / reissued	
AU2007272060 AA	20100506	LSOP	-CB	OPPOSITION LODGED BY	OPPONENT NAME : XYLOTHEQUE LIMITED
AU2007272060 AA	20140403	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2007272060 BB	20100121	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0714400 A2	20130219	LSPB	+	published / reissued	
CN101489958 A	20090722	LSPB	+	published / reissued	
CN101489958 A	20090722	LSPB	+C06	PUBLICATION	
CN101489958 A	20150408	LSRV	-C12	REJECTION OF A	

				PATENT APPLICATION AFTER ITS PUBLICATION	
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EP1878713 A1	20080116	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060714
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IN00803CN2009 A	20090529	LSPB	+	published / reissued	
MX2009000515 A1	20090127	LSPB	+	published / reissued	
MX2009000515 A1	20100901	LSGT	+FG	GRANT OR REGISTRATION	
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Board of Appeals Decision					
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ZA200901031 A	20100428	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: METHOD OF ENHANCING THE LATENT HYDRAULIC AND/OR POZZOLANIC REACTIVITY OF MATERIALS

Abstract: Source: US2016075598A The present invention relates to a method of enhancing the latent hydraulic and/or pozzolanic reactivity of materials, especially of waste and by-products, comprising the steps: providing a starting material containing sources for CaO and at least one of SiO₂ and Al₂O₃ mixing the starting material with water at a water/solids ratio from 0.1 to 100 hydrothermal treating of the starting material mixed with water in an autoclave at a temperature of 100 to 300 degrees centigrade and a residence time from 0.1 to 24 hours to provide an autoclaved product suitable as supplementary cementitious material.

Classifications:

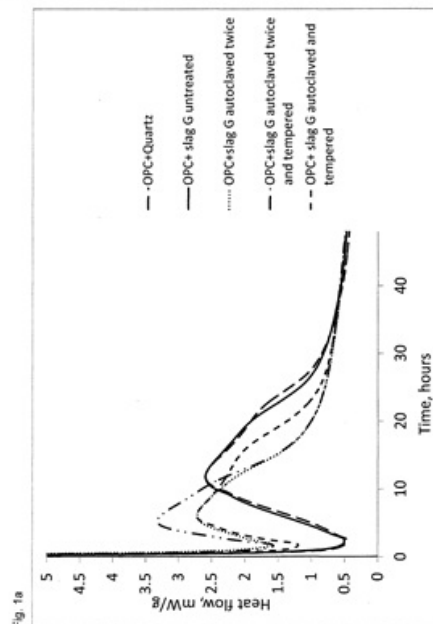
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C04B40/00 C04B7/14 C04B7/26 C04B7/345

C04B7/43 (Advanced/Invention);
C04B103/12 C04B103/14 (Advanced/Non-invention);
C04B40/00 (Core/Invention);
C04B (Subclass/Invention)

CPC: C04B7/14 C04B7/26 C04B22/0093 C04B7/345 C04B7/43
C04B28/04 C04B40/0028 C04B2103/12 C04B2103/14 Y02P40/148
C04B28/08 C04B14/043

US: 106/612 106/704 106/705 106/709 106/713 106/714 106/718
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106/798 106/799 106/819 428/219

PatBase - US2016075598_AA



Family:

Publication number	Publication date	Application number	Application date
AU2014267717 AA	20141120	AU20140267717	20140507
AU2014267717 BB	20170309	AU20140267717	20140507
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WO14183846 A1	20141120	WO2014EP01216	20140507

Priority:

EP20130002496 20130511 EP20130005291 20131111 EP20130005528 20131128
WO2014EP01215 20140507 WO2014EP01214 20140507 ES20130002496T 20130511
WO2014EP01216 20140507

Probable Assignee: HEIDELBERGCEMENT AG

Assignee(s): (std): HEIDELBERGCEMENT AG

Assignee(s): SPENCER NICOLAS ; ITUL ANCA ; SCHMITT DIRK ; ZAJAC MACIEJ ; BEN HAH MOHSEN ; BULLERJAHN FRANK

Inventor(s): (std): BEN HAH MOHSEN ; BEN HAH MOHSEN M ; BULLERJAHN FRANK ; BULLERJAHN FRANK F ; ITUL ANCA ; ITUL ANCA A ; SCHMITT DIRK ; SCHMITT DIRK D ; SPENCER NICOLAS ; SPENCER NICOLAS N ; ZAJAC MACIE ; ZAJAC MACIEJ ; ZAJAC MACIEJ M ; HAH MOHSEN BEN

Inventor(s): FRANK BULLERJAHN ; DIRK SCHMITT ; ANCA ITUL ; NICOLAS SPENCER ; MOHSEN BEN HAH

Agent(s): GRIFFITH HACK; MARKS AND CLERK; ZELLETIN AND PARTNER GBR; WAGNER JUTTA; LEHMANN MARIA ISABEL; ANDROMEDA BA SH; PAUL D; STRAIN AND STRAIN PLLC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2014267717 AA	20141120	LSPB	+	published / reissued	
AU2014267717 AA	20170518	LSRE	DA2	APPLICATIONS FOR AMENDMENT SECTION 104	TEXT : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 27 APR 2017
AU2014267717 BB	20170309	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2014267718 AA	20141120	LSPB	+	published / reissued	
AU2014267719 AA	20141120	LSPB	+	published / reissued	
CA2907893 AA	20150924	LSPB	+	published / reissued	
CA2907893 AA	20151214	LSSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20151208
CA2908543 AA	20150924	LSPB	+	published / reissued	
CA2908543 AA	20151112	LSSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20151030
CA2911192 AA	20151102	LSPB	+	published / reissued	
CA2911192 AA	20151217	LSSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20151210
CN105143138 A	20151209	LSPB	+	published / reissued	
CN105143138 A	20151209	LSPB	+C06	PUBLICATION	
CN105143139 A	20151209	LSPB	+	published / reissued	
CN105143139 A	20151209	LSPB	+C06	PUBLICATION	
CN105143139 A	20170322	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN105143139 B	20170322	LSGT	+	granted / extensions (spc, cpc, pte)	
DK2801557 T3	20151214	LSGT	+	granted / extensions (spc, cpc, pte)	
DK2801558 T3	20151130	LSGT	+	granted / extensions (spc, cpc, pte)	
DK2801559 T3	20160411	LSGT	+	granted /	

EA201592152 A1	20160331	LSPB	+	extensions (spc, cpc, pte)	
EA201592154 A1	20160331	LSPB	+	published / reissued	
EA201592158 A1	20160331	LSPB	+	published / reissued	
EP2801557 A1	20141112	LSPB	+	published / reissued	
EP2801557 A1	20141112	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130511
EP2801557 A1	20150225	LSSES	+R17P	REQUEST FOR EXAMINATION FILED (CORRECTION)	EFFECTIVE DATE : 20150117
EP2801557 A1	20150513	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150417
EP2801557 A1	20150916	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2801557 A1	20150930	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2801557 A1	20151007	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT : GERMAN
EP2801557 A1	20151015	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 749661 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20151015
EP2801557 A1	20151022	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE
EP2801557 A1	20151029	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 502013001151 COUNTRY OF REF DOCUMENT : DE
EP2801557 A1	20151207	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2553241 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20151207
EP2801557 A1	20160125	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20150916
EP2801557 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150916
EP2801557 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150916
EP2801557 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED

				EPO	TIME-LIMIT LAPSED DATE : 20150916
EP2801557 A1	20160210	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2801557 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150916
EP2801557 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150916
EP2801557 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160116
EP2801557 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150916
EP2801557 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150916
EP2801557 A1	20160523	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160616	LSOP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R026 REF DOCUMENT NUMBER : 502013001151 COUNTRY OF REF DOCUMENT : DE
EP2801557 A1	20160617	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20150402523 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20160201
EP2801557 A1	20160630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160523 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160727	LSOP	-26	OPPOSITION FILED	PARTYTYPE : OPPONENT OPPONENT : KARLSRUHER INSTITUT FUER TECHNOLOGIE EFFECTIVE DATE : 20160616
EP2801557 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20160526 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GR PAYMENT DATE : 20160523 YEAR OF FEE PAYMENT : 4

EP2801557 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160523 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20160504 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160525 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NO PAYMENT DATE : 20160520 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20160502 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160523 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20160505 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20160523 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20160523 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20160523 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20160511 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20160503 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20160831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160531 YEAR OF FEE PAYMENT : 4
EP2801557 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150916
EP2801557 A1	20161221	LSOP	-R26	OPPOSITION FILED (CORRECTION)	PARTYTYPE : OPPONENT OPPONENT : KARLSRUHER INSTITUT FUER TECHNOLOGIE/CELEMENT GM EFFECTIVE DATE : 20160616
EP2801557 A1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160511
EP2801557 A1	20170222	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2801557 B1	20150916	LSGT	+	granted / extensions (spc, cpc, pte)	

EP2801558 A1	20141112	LSPB	+	published / reissued	
EP2801558 A1	20141112	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20131111
EP2801558 A1	20150225	LSES	+R17P	REQUEST FOR EXAMINATION FILED (CORRECTION)	EFFECTIVE DATE : 20150117
EP2801558 A1	20150617	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150522
EP2801558 A1	20151104	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2801558 A1	20151113	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2801558 A1	20151115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 759054 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20151115
EP2801558 A1	20151202	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT: GERMAN
EP2801558 A1	20151216	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE
EP2801558 A1	20151217	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 502013001429 COUNTRY OF REF DOCUMENT : DE
EP2801558 A1	20151229	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20151221 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160212	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2559469 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20160212
EP2801558 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20151218 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20151229 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20151222 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20151229 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20151221 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160310	LSRV	REG	REFERENCE TO A	REF COUNTRY CODE : LT

EP2801558 A1	20160321	LSNP	REG	NATIONAL CODE	REF LEGAL EVENT CODE : MG4D
				REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20151104
EP2801558 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160304
EP2801558 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NO PAYMENT DATE : 20151223 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20151223 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20151231 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160304
EP2801558 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160205
EP2801558 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104

EP2801558 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20151230 YEAR OF FEE PAYMENT : 3
EP2801558 A1	20160804	LSOP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R026 REF DOCUMENT NUMBER : 502013001429 COUNTRY OF REF DOCUMENT : DE
EP2801558 A1	20160824	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2801558 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SM NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20160914	LSOP	-26	OPPOSITION FILED	PARTYTYPE : OPPONENT OPPONENT : KARLSRUHER INSTITUT FUER TECHNOLOGIE EFFECTIVE DATE : 20160804
EP2801558 A1	20160930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20151111
EP2801558 A1	20161124	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 4
EP2801558 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP2801558 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NO PAYMENT DATE : 20161122 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4

EP2801558 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20161125 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20161107 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20161104 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20161102 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20161130 YEAR OF FEE PAYMENT : 4
EP2801558 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20161108 YEAR OF FEE PAYMENT : 4
EP2801558 B1	20151104	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2801559 A1	20141112	LSPB	+	published / reissued	
EP2801559 A1	20141112	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20131128
EP2801559 A1	20150225	LSSES	+R17P	REQUEST FOR EXAMINATION FILED (CORRECTION)	EFFECTIVE DATE : 20150117
EP2801559 A1	20150506	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150410
EP2801559 A1	20150624	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20150522
EP2801559 A1	20150812	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150717
EP2801559 A1	20160203	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2801559 A1	20160215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2801559 A1	20160215	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 773625 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160215

EP2801559 A1	20160224	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2801559 A1	20160307	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE
EP2801559 A1	20160310	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602013004831 COUNTRY OF REF DOCUMENT : DE
EP2801559 A1	20160322	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2564432 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20160322
EP2801559 A1	20160610	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2801559 A1	20160704	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20160203
EP2801559 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2801559 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160504
EP2801559 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2801559 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160603
EP2801559 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160603
EP2801559 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2801559 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT

EP2801559 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	LAPSED DATE : 20160203 COUNTRY OF REF DOCUMENT : LV NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2801559 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2801559 A1	20161102	LSOP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R026 REF DOCUMENT NUMBER : 602013004831 COUNTRY OF REF DOCUMENT : DE
EP2801559 A1	20161124	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 4
EP2801559 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2801559 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SM NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2801559 A1	20161214	LSOP	-26	OPPOSITION FILED	PARTYTYPE : OPPONENT OPPONENT : KARLSRUHER INSTITUT FUER TECHNOLOGIE/CELITEMENT GM EFFECTIVE DATE : 20161102
EP2801559 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NO PAYMENT DATE : 20161122 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20161118 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20161125 YEAR OF FEE PAYMENT : 4

EP2801559 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2801559 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160503
EP2801559 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20161117 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20161130 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20161121 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2801559 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20161121 YEAR OF FEE PAYMENT : 4
EP2801559 B1	20160203	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2553241 T3	20151207	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2559469 T3	20160212	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2564432 T3	20160322	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1213237 A1	20160630	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1213238 A1	20160630	LSGT	+	granted / extensions (spc, cpc, pte)	
ID201605444 A	20161007	LSPB	+	published / reissued	
IN08490DN2015 A	20160729	LSPB	+	published / reissued	
IN08505DN2015 A	20160715	LSPB	+	published / reissued	
MA38557 A1	20161031	LSPB	+	published / reissued	
PT2801557 T	20151126	LSGT	+	granted / extensions (spc, cpc, pte)	
UA112149 C2	20160725	LSGT	+	granted / extensions (spc, cpc, pte)	
UA113253 C2	20161226	LSGT	+	granted / extensions (spc, cpc, pte)	
US2016075598 AA	20160317	LSPB	+	published / reissued	

US2016075598 AA	20151029	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: SCHMITT, DIRK; BEN HAHA, MOHSEN; ITUL, ANCA; AND OTHERS; REEL/FRA:036911/0655 EFFECTIVE DATE : 20151023	
US2016102021 AA	20160414	LSPB	+	published / reissued		
US2016102021 AA	20151029	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: BULLERJAHN, FRANK; BEN HAHA, MOHSEN; SPENCER, NICOLAS; AND OTHERS; REEL/FRA:036911/0742 EFFECTIVE DATE : 20151023	
US2016102021 AA	20170403	LSAS	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications		
US2016107933 AA	20160421	LSPB	+	published / reissued		
US2016107933 AA	20151029	LSAS	AS	ASSIGNMENT	OWNER NAME : HEIDELBERGCEMENT AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: SCHMITT, DIRK; BEN HAHA, MOHSEN; ITUL, ANCA; AND OTHERS; REEL/FRA:036911/0523 EFFECTIVE DATE : 20151023	
US9604879 BB	20170328	LSGT	+	granted / extensions (spc, cpc, pte)		
US9604879 BB	20170308	LSGT	PAT1	Patented Case		
WO14183844 A1	20141120	LSPB	+	published / reissued		
WO14183844 A1	20151026	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14787024 COUNTRY OF REF DOCUMENT : US	
WO14183844 A1	20151102	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2911192 COUNTRY OF REF DOCUMENT : CA	
WO14183844 A1	20151111	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE	
WO14183844 A1	20151126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014267717 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140507 KIND CODE OF REF DOCUMENT : A	
WO14183844 A1	20151210	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 201592152 COUNTRY OF REF DOCUMENT : EA	
WO14183844 A1	20151210	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : A201512261 COUNTRY OF REF DOCUMENT : UA	
WO14183844 A1	20160615	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14722114 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1	
WO14183845 A1	20141120	LSPB	+	published / reissued		
WO14183845 A1	20150924	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2907893 COUNTRY OF REF DOCUMENT : CA	

WO14183845 A1	20151026	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14787006 COUNTRY OF REF DOCUMENT : US
WO14183845 A1	20151111	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14183845 A1	20151126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014267718 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140507 KIND CODE OF REF DOCUMENT : A
WO14183845 A1	20151210	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 201592158 COUNTRY OF REF DOCUMENT : EA
WO14183845 A1	20160615	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14722115 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO14183846 A1	20141120	LSPB	+	published / reissued	
WO14183846 A1	20150924	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2908543 COUNTRY OF REF DOCUMENT : CA
WO14183846 A1	20151026	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14787012 COUNTRY OF REF DOCUMENT : US
WO14183846 A1	20151111	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14183846 A1	20151126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014267719 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140507 KIND CODE OF REF DOCUMENT : A
WO14183846 A1	20151210	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 201592154 COUNTRY OF REF DOCUMENT : EA
WO14183846 A1	20151210	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : A201512262 COUNTRY OF REF DOCUMENT : UA
WO14183846 A1	20160615	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14725005 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: ADMIXTURE FOR CEMENT AND PRODUCTION OF CEMENT-BASED HARDENED PRODUCT

Abstract: Source: JP11310443A PROBLEM TO BE SOLVED: To obtain a cement admixture capable of regulating promoting actions on setting and hardening and the pot life by including amines and a nitrite as principal components therein. SOLUTION: An alkanolamine can be used as amines and, above all, triethanolamine and diethanolamine are suitable. Calcium nitrite, sodium nitrite, potassium nitrite, or the like, can be used as the nitrite and, above all, the calcium nitrite is suitable. The amount of the nitrite used is preferably greater than or equal to10 parts by weight based on 100 parts by weight of the amines. Furthermore, a water-reducing admixture in an amount of greater than or equal to5 parts by weight based on 100 parts by weight of the amines and expressed in terms of the solid content is preferably compounded. The amines and nitrite or further the water-reducing admixture are added to a cement paste, a mortar and a concrete and the resultant mixture is heated and/or pressed and molded to afford a cement-based hardened product. As for the cement admixture, the amines are used in an amount within the range of preferably 0.01-3 parts by weight based on 100 parts by weight of the cement and the nitrite is used in an amount within the range of preferably 0.05-5 parts by weight based on 100 parts by weight of the cement and expressed in terms of an anhydride. Furthermore, the water-reducing admixture is used in an amount within the range of preferably 0.02-3 parts by weight based on 100 parts by weight of the cement and expressed in terms of the solid content.

Classifications:

International (IPC 8-9): C04B22/08 C04B24/12 C04B28/04 C04B40/00 (Advanced/Invention); C04B103/14 C04B103/22 (Advanced/Non-invention); C04B22/00 C04B24/00 C04B28/00 C04B40/00 (Core/Invention)
International (IPC 1-7): C04B103/14 C04B103/22 C04B22/08 C04B24/12 C04B28/04
CPC: C04B40/0039 C04B2103/12 C04B2103/14
European: C04B40/00D4 M04B103/12 M04B103/14

試験時間									
JP11310443-A2									
No.	セメント 種類	減水剤 種類	トリ エー タール アミン	亜硝酸 カルシウム	減水剤	減加量 合計	硬化時間 (時間:分)		備考
1-1	普通	A	0.3	0.1	0.38	0.78	0:10	0:11	実施例
1-2	普通	A	0.3	0.3	0.38	0.98	0:12	0:13	実施例
1-3	普通	A	0.3	0.5	0.38	1.18	0:15	0:17	実施例
1-4	普通	A	0.3	0.8	0.38	1.48	0:25	0:28	実施例
1-5	普通	A	0.3	1.0	0.38	1.68	1:00	1:20	実施例
1-6	早強	B	0.1	0.5	0.19	0.79	0:56	2:30	実施例
1-7	早強	B	0.1	1.0	0.19	1.29	3:35	5:06	実施例
1-8	普通	A	0.0	0.0	0.38	0.38	>6:00	>7:00	比較例
1-9	普通	A	0.3	0.0	0.38	0.68	0:06	0:07	比較例
1-10	普通	A	0.0	1.0	0.38	1.38	>6:00	>7:00	比較例

注1) 表中の配合量は、セメント100重量部に対する重量部で示す。
注2) セメントの種類
普通: 普通ポルトランドセメント
早強: 早強ポルトランドセメント
注3) 亜硝酸カルシウムの配合量は無水物換算で、減水剤の配合量は固形分換算で示す。

Family:

Publication number	Publication date	Application number	Application date
JP11310443 A2	19991109	JP19980132700	19980427

Priority:

JP19980132700 19980427

Probable Assignee: TAIHEIYO CEMENT CORP

Assignee(s): (std): TAIHEIYO CEMENT CORP

Inventor(s): (std): HOSOKAWA YOSHIFUMI ; MATSUURA SHIGERU ; SOEDA KOICHI ; TAGUMA YASUHISA

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
JP11310443 A2	19991109	LSPB	+	published / reissued	

Title: METHOD FOR PROVIDING MODIFIED CEMENT COMPOSITIONS, DRY MORTARS AND CEMENT-FREE MIXTURES

Abstract: Source: US2014336306A The present invention relates to methods for providing modified cement compositions having increased slip resistance and/or a decreased setting time in comparison to cement compositions comprising from 1 to 10 weight percent redispersible polymer powder (RDP) and water soluble cellulose ether in a specific amount from 0.1 to 1.0 weight percent, based on the total dry weight of said composition. Also provided are dry mortars comprising cement, RDP, water soluble cellulose ether and one or more additives selected from gelatin, bentonite and combinations thereof for use in such methods, and cement-free mixtures comprising water soluble cellulose ether and one or more additives selected from gelatin, bentonite and combinations thereof which may be added to cement binder for use a for use in such methods.

Classifications:

International (IPC 8-9): C04B14/10 C04B22/00 C04B24/14 C04B24/26 C04B24/38 C04B28/02 C04B28/04 C04B40/00 C08K3/34 C08L1/26 C08L1/28 C08L25/10 C08L31/04 C08L89/06 (Advanced/Invention); C04B111/00 C08K3/34 C08L89/06 (Advanced/Non-invention)

CPC: C04B28/04 C04B24/14 C04B22/00 C04B40/0039 C04B28/02 C04B2111/00637 C08L1/28 C08L1/284 C04B14/104 C04B24/2623 C04B24/383 C04B40/0028 C04B24/2676 C04B2103/0057 C08L25/10 C08K3/346 C08L89/06 C08L31/04

US: 106/140.1 106/197.01 524/18 524/42 524/5 524/8

Family:

Publication number	Publication date	Application number	Application date
CN103946298 A	20140723	CN201280057816	20121204
EP2788423 A1	20141015	EP20120809896	20121204
IN02977DN2014 A	20150313	IN2014DN02977	20140415
KR20140105749 A	20140902	KR20147015958	20121204
US2014336306 AA	20141113	US20120362963	20121204
US9505658 BB	20161129	US20120362963	20121204
WO13085900 A1	20130613	WO2012US67756	20121204

Priority:

US20110568909P 20111209 US20120362963 20121204 WO2012US67756 20121204

Probable Assignee: DOW GLOBAL TECHNOLOGIES LLC

Assignee(s): (std): DOW GLOBAL TECH LLC ; DOW GLOBAL TECHNOLOGIES INC ; DOW GLOBAL TECHNOLOGIES LLC

Inventor(s): (std): NEUBAUER JOERG ; SCHARLEMANN SONJA

Agent(s): HOGGINS MARK ANDREW; ANDREW E C; MORK STEVEN W

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN103946298 A	20140723	LSPB	+	published / reissued	
CN103946298 A	20140723	LSPB	+C06	PUBLICATION	
EP2788423 A1	20141015	LSPB	+	published / reissued	
EP2788423 A1	20141015	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140715
IN02977DN2014 A	20150313	LSPB	+	published / reissued	
KR20140105749 A	20140902	LSPB	+	published / reissued	
US2014336306 AA	20141113	LSPB	+	published / reissued	
US2014336306 AA	20161017	LSAS	AS	ASSIGNMENT	OWNER NAME : DOW GLOBAL TECHNOLOGIES LLC, MICHIGAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SCHARLEMANN, SONJA; NEUBAUER, JOERG; REEL/FRAME:040032/0608 EFFECTIVE DATE : 20120327
US9505658 BB	20161129	LSGT	+	granted / extensions (spc, cpc, pte)	
US9505658 BB	20161109	LSGT	PAT1	Patented Case	
WO13085900 A1	20130613	LSPB	+	published / reissued	
WO13085900 A1	20140610	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

WO13085900 A1	20140612	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20147015958 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
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Title: ACCELERATOR**Abstract:** Source: US2014331899A The invention relates to additives for hydraulic binders and systems such as concrete and mortar produced therefrom. More particularly, the present invention relates to a setting and curing accelerator for hydraulic binders produced by reacting a calcium compound CV with a silica sol SL.**Classifications:****International (IPC 8-9):** C04B22/00 (Advanced/Invention)**CPC:** C04B2103/12 C04B2103/14 C04B14/043 C04B22/00 C04B22/0086**US:** 106/638 106/819**Family:**

Publication number	Publication date	Application number	Application date
CN103958432 A	20140730	CN201280058342	20121221
EP2607329 A1	20130626	EP20110195531	20111223
EP2794507 A1	20141029	EP20120813005	20121221
US2014331899 AA	20141113	US20120358158	20121221
WO13093034 A1	20130627	WO2012EP76715	20121221

Priority:

EP20110195531 20111223 EP20120813005 20121221 WO2012EP76715 20121221

Probable Assignee: SIKA TECHNOLOGY AG**Assignee(s):** (std): SIKA TECHNOLOGY AG**Inventor(s):** (std): BUERGE CHRISTIAN ; KURZ CHRISTOPHE ; MAEDER GILBERT ; MARAZZANI BEAT ; WOMBACHER FRANZ**Agent(s):** SIKA PATENT ATTORNEYS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)[View legal status timeline](#)

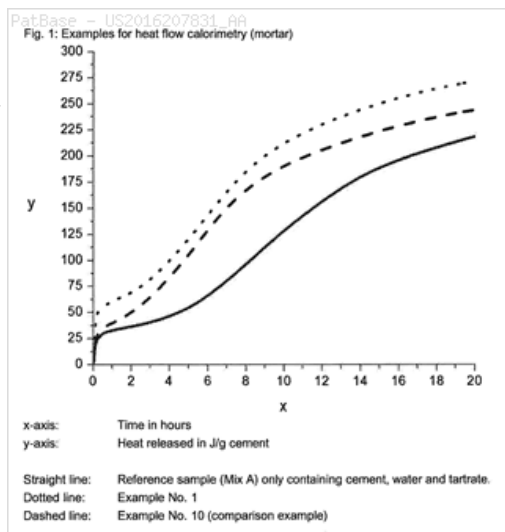
Patent	Date recorded	Event group	Code	Event	Details
CN103958432 A	20140730	LSPB	+	published / reissued	
CN103958432 A	20140730	LSPB	+C06	PUBLICATION	
EP2607329 A1	20130626	LSPB	+	published / reissued	
EP2607329 A1	20140723	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20140103
EP2794507 A1	20141029	LSPB	+	published / reissued	
EP2794507 A1	20141029	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140723
US2014331899 AA	20141113	LSPB	+	published / reissued	
US2014331899 AA	20140514	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WOMBACHER, FRANZ; MARAZZANI, BEAT; BUERGE, CHRISTIAN; AND OTHERS; SIGNING DATES FROM 20140415 TO 20140416; REEL/FRAME:032887/0647
US2014331899 AA	20170215	LSRV	-FRM1	Final Rejection Mailed	
WO13093034 A1	20130627	LSPB	+	published / reissued	
WO13093034 A1	20140623	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: HARDENING ACCELERATOR CONTAINING ETTRINGITE AND CALCIUM SILICATE HYDRATE

Abstract: Source: US2016207831A The invention concerns a process for the preparation of a calcium silicate hydrate and ettringite containing hardening accelerator composition by reaction of a water-soluble calcium compound, silicate compound, aluminum compound and a sulfate compound, wherein the molar ratio of silicon to sulfate is from 2/1 to 30/1 and the reaction of the four compounds being carried out in the presence of an aqueous solution which contains a comb polymer suitable as a plasticizer for hydraulic binders. Also concerned are the use of said accelerators in building material mixtures, the building material mixtures containing said accelerators and a process for the preparation of a sprayable binder composition in which said accelerators are used.

Classifications:

International (IPC 8-9): C01B33/24 C01F7/76 C04B22/08 C04B22/14 C04B24/24 C04B24/26 C04B28/02 C04B28/04 C04B28/14 C04B28/16 C04B40/00 C08F290/06 (Advanced/Invention) **CPC:** C04B22/142 C04B22/08 C04B24/2694 C04B24/246 C04B28/04 C04B2111/00155 C04B2103/14 C04B28/02 C04B28/145 C04B28/16 C04B40/0039 C04B40/0042 C04B2111/00146 Y02W30/94 **US:** 524/5



Family:

Publication number	Publication date	Application number	Application date
CN105683130 A	20160615	CN201480059483	20140822
EP2842927 A1	20150304	EP20130182124	20130829
EP3038994 A1	20160706	EP20140753267	20140822
JP2016530203 T2	20160929	JP20160537244T	20140822
US2016207831 AA	20160721	US20140914993	20140822
WO15028402 A1	20150305	WO2014EP67906	20140822

Priority:

EP20130182124 20130829 EP20140753267 20140822 WO2014EP67906 20140822

Probable Assignee: BASF CONSTRUCTION SOLUTIONS GMBH

Assignee(s): (std): BASF CONSTR POLYMERS GMBH ; BASF CONSTRUCTION POLYMERS GMBH ; BASF CONSTRUCTION SOLUTIONS GMBH

Inventor(s): (std): HESSE CHRISTOPH ; LOGES NIKLAS

Agent(s): BASF IP ASSOCIATION

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN105683130 A	20160615	LSPB	+	published / reissued	
EP2842927 A1	20150304	LSPB	+	published / reissued	
EP2842927 A1	20150304	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130829
EP2842927 A1	20160420	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20150905
EP3038994 A1	20160706	LSPB	+	published / reissued	
EP3038994 A1	20160706	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160329
JP2016530203 T2	20160929	LSPB	+	published / reissued	
US2016207831 AA	20160721	LSPB	+	published / reissued	

US2016207831 AA	20160406	LSAS	AS	ASSIGNMENT	OWNER NAME : BASF CONSTRUCTION SOLUTIONS GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LOGES, NIKLAS; HESSE, CHRISTOPH; SIGNING DATES FROM 20160317 TO 20160331; REEL/FRA:038200/0717	
US2016207831 AA	20170213	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications		
US2016207831 AA	20170512	LSFE	+PPV1	Publications -- Issue Fee Payment Verified		
WO15028402 A1	20150305	LSPB	+	published / reissued		
WO15028402 A1	20160226	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14914993 COUNTRY OF REF DOCUMENT : US	
WO15028402 A1	20160229	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016537244 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :	
WO15028402 A1	20160229	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE	

Title: CALCIUM-SILICATE-BASED POROUS PARTICLES, COMPOSITION, METHOD OF MAKING AND USE THEREOF

Abstract: Source: US2017088431A A method for synthesizing calcium-silicate-based porous particles (CSPPs) is described. Control over CSPP morphology and pore size is achieved through a refined solution-based synthesis, allowing loading of a variety of sealants. These particles, upon external stimuli, release the loaded sealant into the surrounding material. Methods of loading the CSPPs with loading sealant are described. The CSPPs may be used in pure form or mixed with another material to deliver self-healing, sealing and multi-functional properties to a physical structure. The composition of the CSPPs is described, along with methods of use of the CSPPs.

Classifications:

International (IPC 8-9): A61K9/14 A61L27/02 A61L27/10 B05D1/30 C01B33/24 C04B22/00 C04B24/02 C04B24/12 C04B28/04 C04B28/06 C04B28/18 C09K8/467 E01C11/00 E01C23/00 (Advanced/Invention)
CPC: C01B33/24 C04B22/00 C04B24/023 C04B24/121 C04B28/04 C04B28/06 C09K8/467 B05D1/30 E01C23/00 E01C11/005 C01P2004/34 C01P2004/64 C01P2004/62 C01P2004/61 C01P2006/16 C04B2111/72 B05D2430/00 C04B2111/00474 C04B2111/0075 C09K2208/10 E04G23/0203 E21B33/138

PatBase - US2017088431_AA

Fig. 1

Loaded CSPPs After Injection



Released Sealant & CSPPs After Stimulus



Family:

Publication number	Publication date	Application number	Application date
US2017088431 AA	20170330	US20160280649	20160929
WO17059111 A1	20170406	WO2016US54504	20160929

Priority:

US20150234230P 20150929 US20160280649 20160929

Probable Assignee: C CRETE TECH LLC

Assignee(s): (std): C CRETE TECH LLC

Assignee(s): C CRETE TECHNOLOGIES LLC

Inventor(s): (std): DESIREDDY ANIL ; MILLER JOSEPH B ; SHAHSAVARI ROUZBEH ; YAMATO KAZUHIRO

Agent(s): PORTER GREGORY L ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2017088431 AA	20170330	LSPB	+	published / reissued	
WO17059111 A1	20170406	LSPB	+	published / reissued	

Title: Alkali-free setting and hardening accelerator

Abstract: Source: US2002035952A Described are setting and hardening accelerators for hydraulic binders and said binder comprising compositions that are free of alkali metals and chlorides. The setting and hardening accelerators comprise, as main component, water-soluble fluoride comprising aluminum salts and water-soluble sulfate comprising aluminum salts, as well as optionally complexing agents and/or amines. In comparison with alkaline accelerators, said mixtures result in an essential shortening of the setting time and a fast development of compressive strengths.

Classifications:

International (IPC 8-9): C04B14/12 C04B22/06 C04B22/08 C04B22/12 C04B22/14 C04B22/16 C04B24/02 C04B24/04 C04B24/06 C04B24/12 C04B24/24 C04B24/26 C04B24/28 C04B24/32 C04B24/38 C04B28/02 C04B40/00 E04G21/02 E21D11/10 (Advanced/Invention); C04B103/10 C04B103/12 C04B103/14 C04B103/44 C04B111/10 E04G21/02 E21D11/10 (Advanced/Non-invention); C04B14/02 C04B22/00 C04B24/00 C04B28/00 C04B40/00 E04G21/02 E21D11/10 (Core/Invention)
International (IPC 1-7): C04B103/10 C04B103/12 C04B103/14 C04B103/44 C04B111/10 C04B14/12 C04B22/06 C04B22/08 C04B22/12 C04B22/14 C04B22/16 C04B24/02 C04B24/04 C04B24/06 C04B24/12 C04B24/24 C04B24/26 C04B24/28 C04B24/32 C04B24/38 C04B28/02 C04B7/00 E04G21/02 E21D11/10
CPC: C04B28/02 C04B40/0039 C04B2103/12 C04B2103/14 C04B2111/00146 C04B2111/1025 C04B2111/1062
European: C04B28/02 C04B40/00D4 M04B103/14 M04B111/00M16 M04B111/10C M04B111/10K
US: 106/724 106/727 106/808 106/808S 106/819 106/823

JP2002080250 A2		
番号	成分	質量%
1	水	30
	水酸化アルミニウム	10
	フッ化水素酸40%	20
	硫酸アルミニウム	32
	錯化剤*	0.5
	アミン**	7.5

Family:

Publication number	Publication date	Application number	Application date
AT255075 E	20031215	AT20000113018T	20000621
AU200151883 A5	20020103	AU20010051883D	20010612
AU776941 B2	20040930	AU20010051883	20010612
CA2349796 AA	20011221	CA20012349796	20010607
DE50004567 D1	20040108	DE20005004567	20000621
DK1167317 T3	20040405	DK20000113018T	20000621
EP1167317 A1	20020102	EP20000113018	20000621
EP1167317 B1	20031126	EP20000113018	20000621
EP1167317 B2	20120222	EP20000113018	20000621
ES2211417 T3	20040716	ES20000113018T	20000621
ES2211417 T5	20120613	ES20000113018T	20000621
IN00492MA2001 A	20070427	IN2001MA00492	20010619
IN218934 B	20080606	IN2001MA00492	20010619
IN218934 B	20080606	IN2001CH00492	20010619
JP2002080250 A2	20020319	JP20010188367	20010621
JP5079950 B2	20121121	JP20010188367	20010621
NZ512250 A	20021126	NZ20010512250	20010608
PT1167317 T	20040430	PT20000113018T	20000621
US2002035952 AA	20020328	US20010881731	20010618
US6537367 BB	20030325	US20010881731	20010618

Priority:

EP20000113018 20000621 ES20000113018T 20000621

Probable Assignee: SIKA SCHWEIZ AG

Assignee(s): (std): SIKA AG ; SIKA AG VORM ; SIKA AG VORM KASPAR WINKLER AND CO ; SIKA SCHWEIZ AG ; SIKA SCHWEIZ AG ZUERICH ; SIKA TECHNOLOGY AG ; SIKA VORM AG ; SOMMER MARCEL ; WOMBACHER FRANZ

Assignee(s): SIKA VORM KASPAR WINKLER AND CO AG ; SIKA SCHWEIZ ZUERICH AG ; BURGE THEODOR A

Inventor(s): (std): BUERGE THEODOR A ; BURGE THEODOR A ; FRANZ WOMBACHER ; MARCEL SOMMER ; SOMMER MARCEL ; THEODOR A BURGE ; WOMBACHER FRANZ

Inventor(s): A BURGE ; WOMBACHER

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SIKA PATENT ATTORNEYS; DE ELZABURU ALBERTO; AOKI ATSUSHI; KOGA TETSUJI; ISHIDA TAKASHI

Designated states: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT255075 E	20031215	LSGT	+	granted / extensions (spc, cpc, pte)	
AU200151883 A5	20020103	LSPB	+	published / reissued	
AU200151883 A5	20040923	LSAS	TC	CHANGE OF APPLICANT'S NAME (SEC. 104)	OWNER NAME : SIKA SCHWEIZ AG DESCRIPTION : FORMER NAME: SIKA AG, VORM. KASPAR WINKLER AND CO.

AU776941 B2	20040930	LSGT	+	granted / extensions (spc, cpc, pte)	
AU776941 B2	20040923	LSAS	TC	CHANGE OF APPLICANT'S NAME (SEC. 104)	PARTYTYPE : OWNER OWNER : SIKA SCHWEIZ AG OLDPARTY : FORMER NAME: SIKA AG, VORM. KASPAR WINKLER AND CO.
CA2349796 AA	20011221	LSPB	+	published / reissued	
CA2349796 AA	20060503	LSES	+EEER	EXAMINATION REQUEST	
CA2349796 AA	20100607	LSLE	-FZDE	DEAD	
CA2349796 AA	20100802	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20100607
DE50004567 D1	20041111	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
DK1167317 T3	20040405	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1167317 A1	20020102	LSPB	+	published / reissued	
EP1167317 A1	20020731	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20020525
EP1167317 A1	20020918	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	TEXT : AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
EP1167317 A1	20030827	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : SIKA SCHWEIZ AG
EP1167317 A1	20031119	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SOMMER, MARCEL
EP1167317 A1	20031119	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : WOMBACHER, FRANZ
EP1167317 A1	20031119	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BUERGE, THEODOR A.
EP1167317 A1	20031126	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20031126
EP1167317 A1	20031126	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP1167317 A1	20031128	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1167317 A1	20040114	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : GERMAN
EP1167317 A1	20040319	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20040400708 COUNTRY OF REF DOCUMENT : GR
EP1167317 A1	20040630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20040630
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DESIGNATED STATE(S) :					
EP1167317 A1	20041006	LSOP	-26	OPPOSITION FILED	PARTYTYPE : OPPONENT OPPONENT : MAPEI S.P.A EFFECTIVE DATE : 20040805
EP1167317 A1	20041201	LSOP	-NLR1	NL: OPPOSITION HAS BEEN FILED WITH THE EPO	PARTYTYPE : OPPONENT REF COUNTRY CODE : EP OPPONENT : MAPEI S.P.A
EP1167317 A1	20070221	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	PARTYTYPE : OWNER OWNER : SIKA TECHNOLOGY AG
EP1167317 A1	20070829	LSOP	-26	OPPOSITION FILED	PARTYTYPE : OPPONENT OPPONENT : MAPEI S.P.A EFFECTIVE DATE : 20040805
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EP1167317 A1	20081031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20080624 YEAR OF FEE PAYMENT : 9
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EP1167317 A1	20090227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20080730 YEAR OF FEE PAYMENT : 9
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EP1167317 A1	20100301	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON-PAYMENT OF THE ANNUAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20100101
EP1167317 A1	20100331	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1167317 A1	20100430	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT :

				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20090622
EP1167317 A1	20100531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20090621
EP1167317 A1	20100630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20090630
EP1167317 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20090630
EP1167317 A1	20100730	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20100101
EP1167317 A1	20110429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20090621
EP1167317 A1	20120222	LSRE	27A	MAINTAINED AS AMENDED	EFFECTIVE DATE : 20120222
EP1167317 A1	20120229	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : AEN TEXT : AUFRECHTERHALTUNG DES PATENTES IN GEANDERTER FORM
EP1167317 A1	20120412	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R102 REF DOCUMENT NUMBER : 50004567 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120222
EP1167317 A1	20120523	LSAS	REG	REFERENCE TO A NATIONAL CODE	PARTYTYPE : OWNER REF COUNTRY CODE : PT OWNER : SIKA TECHNOLOGY AG, CH REF LEGAL EVENT CODE : PC4A EFFECTIVE DATE : 20120508
EP1167317 A1	20120529	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20120400638 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20120417
EP1167317 A1	20120605	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : RPEO
EP1167317 A1	20120613	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : DC2A REF DOCUMENT NUMBER : 2211417 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T5 DESIGNATED STATE(S) : EFFECTIVE DATE : 20120613
EP1167317 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GR PAYMENT DATE : 20120627 YEAR OF FEE PAYMENT : 13
EP1167317 A1	20121031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20120629

EP1167317 A1	20121231	LSFE	+PGFP	OFFICE POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	YEAR OF FEE PAYMENT : 13 COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20120717 YEAR OF FEE PAYMENT : 13
EP1167317 A1	20121231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20120717 YEAR OF FEE PAYMENT : 13
EP1167317 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20120529 YEAR OF FEE PAYMENT : 13
EP1167317 A1	20131031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20130920 YEAR OF FEE PAYMENT : 14
EP1167317 A1	20131031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20130902 YEAR OF FEE PAYMENT : 14
EP1167317 A1	20140102	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : PT REF LEGAL EVENT CODE : MM4A TEXT : LAPSE DUE TO NON- PAYMENT OF FEES EFFECTIVE DATE : 20131223
EP1167317 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20131223
EP1167317 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20130622
EP1167317 A1	20140204	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP1167317 A1	20140227	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : ML REF DOCUMENT NUMBER : 20120400638 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20140103
EP1167317 A1	20140328	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20140228
EP1167317 A1	20140530	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20140103
EP1167317 A1	20140530	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20130701
EP1167317 A1	20141016	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20141016
EP1167317 A1	20150101	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 50004567 COUNTRY OF REF DOCUMENT : DE
EP1167317 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20130622

EPO					
EP1167317 A1	20150130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1167317 A1	20150326	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 50004567 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20150101
EP1167317 A1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20140630
EP1167317 A1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20140630
EP1167317 A1	20150430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150101
EP1167317 A1	20150831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20150624 YEAR OF FEE PAYMENT : 16
EP1167317 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160621 YEAR OF FEE PAYMENT : 17
EP1167317 A1	20170215	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MM01 REF DOCUMENT NUMBER : 255075 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160621
EP1167317 B1	20031126	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1167317 B2	20120222	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2211417 T3	20040716	LSGT	+	granted / extensions (spc, cpc, pte)	
IN00492MA2001 A	20070427	LSPB	+	published / reissued	
IN218934 B	20080606	LSGT	+	granted / extensions (spc, cpc, pte)	
IN218934 B	20080606	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2002080250 A2	20020319	LSPB	+	published / reissued	
JP2002080250 A2	20110413	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110412
JP2002080250 A2	20111012	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111011
JP2002080250 A2	20111021	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20111020
JP2002080250 A2	20111102	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20111101

JP2002080250 A2	20111108	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20111020
JP2002080250 A2	20120719	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2002080250 A2	20120801	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120731
JP2002080250 A2	20120802	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP2002080250 A2	20120906	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120830
JP2002080250 A2	20120907	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150907 YEAR OF FEE PAYMENT : 3
JP2002080250 A2	20120907	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP5079950 B2	20121121	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5079950 B2	20080624	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20080623
JP5079950 B2	20110413	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110412
JP5079950 B2	20111012	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111011
JP5079950 B2	20111021	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20111020
JP5079950 B2	20111102	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20111101
JP5079950 B2	20111108	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20111020
JP5079950 B2	20120719	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP5079950 B2	20120801	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120731
JP5079950 B2	20120802	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP5079950 B2	20120906	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120830
JP5079950 B2	20120907	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150907 YEAR OF FEE PAYMENT : 3
JP5079950 B2	20120907	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150

JP5079950 B2	20150907	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
NZ512250 A	20021126	LSPB	+	published / reissued	
NZ512250 A	20030328	LSGT	+PSEA	PATENT SEALED	
NZ512250 A	20080731	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	
PT1167317 T	20040430	LSGT	+	granted / extensions (spc, cpc, pte)	
US2002035952 AA	20020328	LSPB	+	published / reissued	
US6537367 BB	20030325	LSGT	+	granted / extensions (spc, cpc, pte)	
US6537367 BB	20011002	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA AG, VORM. KASPAR WINKLER AND CO., SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SOMMER, MARCEL; WOMBACHER, FRANC; BURGE, THEODOR A.; REEL/FRAME:012215/0778 EFFECTIVE DATE : 20010718
US6537367 BB	20030204	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA SCHWEIZ AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SIKA AG., VORM. KASPAR WINKLER AND CO.; REEL/FRAME:013723/0842 EFFECTIVE DATE : 20020716
US6537367 BB	20060925	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6537367 BB	20100927	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6537367 BB	20150325	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6537367 BB	20150512	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20150325

Title: LOW DENSITY ACCELERANT AND STRENGTH ENHANCING ADDITIVE FOR CEMENTITIOUS PRODUCTS AND METHODS OF USING SAME

Abstract: Source: US2002166479A Disclosed are concrete and fiber cement formulations and products comprising low-density calcium silicate hydrate, and methods for producing these formulations and products. The disclosed formulations exhibit accelerated curing times. Other advantages of the disclosed formulations include improved dimensional stability in extruded products, reduced cracking, and reduced wash-out in underwater applications. The products of the disclosed formulation have lower cost of production and faster time to market.

Classifications:

International (IPC 8-9): B28B3/20 B28C7/00 C04B103/12 C04B14/04 C04B22/00 C04B22/06 C04B22/08 C04B28/02 C04B28/04 C04B28/18 C04B28/26 (Advanced/Invention); C04B103/12 C04B103/14 C04B14/38 C04B14/48 C04B16/02 C04B16/06 C04B18/10 C04B22/06 C04B24/38 (Advanced/Non-invention);

B28B3/20 B28C7/00 C04B14/02 C04B22/00 C04B28/00 (Core/Invention); C04B14/38 C04B16/00 C04B18/04 C04B24/00 (Core/Non-invention)

International (IPC 1-7): B28B3/20 B28C7/00 C04B 14/48 C04B103 C04B103/12 C04B103/12 C04B103/12 C04B14/04 C04B14/08 C04B14/48 C04B16/02 C04B22/00 C04B22/04 C04B22/06 C04B22/08 C04B28/02 C04B28/04 C04B28/18

CPC: Y02W30/97 C04B28/04 C04B14/043 C04B22/0086 C04B22/06 C04B28/02 C04B28/18 C04B2103/12

European: C04B14/04F C04B22/00N C04B22/06 C04B28/02 C04B28/04 C04B28/18 M04B103/12

US: 106/600 106/644 106/713 106/729 106/729S 106/735 106/737 106/785 106/819 256/333 256/DIG.43 264/333

PatBase - US2002166479_AA

Patent Application Publication Nov. 14, 2002 Sheet 1 of 4 US 2002/0166479 A1



Figure 1

Family:

Publication number	Publication date	Application number	Application date
AR034212 AA	20040204	AR2002P100791	20020305
AU2002302913 AA	20020919	AU20020302913	20020304
AU2002302913 BB	20080124	AU20020302913	20020304
BRPI0207887 A	20040323	BR2002PI07887	20020304
CA2439660 AA	20030829	CA20022439660	20020304
CL2002000413 A1	20030325	CL20020000413	20020304
CN1543444 A	20041103	CN20028007960	20020304
CZ20032694 A3	20040714	CZ20030002694	20020304
EP1373160 A1	20040102	EP20020730614	20020304
EP1373160 A4	20060405	EP20020730614	20020304
JP2005506262 T2	20050303	JP20020569753T	20020304
JP4220781 B2	20090204	JP20020569753T	20020304
KR20040030525 A	20040409	KR20037011598	20030904
KR20090012372 A	20090203	KR20097001338	20090121
MX264199 B	20090128	MX2003PA07965	20020304
MXPA03007965 A1	20031204	MX2003PA07965	20020304
MY129267 A	20070330	MY20020000759	20020304
NZ528311 A	20061222	NZ20020528311	20020304
PL364824 A1	20041227	PL20020364824	20020304
TH59176 A	20031030	TH20021000728	20020304
TWI239323 B	20050911	TW20020104091	20020305
US2002166479 AA	20021114	US20020090340	20020304
US7041167 BB	20060509	US20020090340	20020304
WO02070425 A1	20020912	WO20021B01833	20020304

Priority:

US20010273761P 20010305	US20010273762P 20010305	US20010273764 20010305
US20010273764 20010305	US20010273766P 20010305	US20010273764P 20010305
WO20021B01833 20020304	US20020090340 20020304	

Probable Assignee: JAMES HARDIE TECHNOLOGY LTD

Assignee(s): (std): HARDIE JAMES RES PTY LTD ; JAMES HARDIE INT FINANCE ; JAMES HARDIE INT FINANCE BV ; JAMES HARDIE RES PTY LTD ; JIANG CHONGJUN ; JAMES HARDIE INTERNAT FINANCE

Assignee(s): JAMES HARDIE INTERNATIONAL FINANCE B ; JAMES HARDIE RESEARCH PTY LIMITED ; JAMES HARDIE INTERNATIONAL FINANCE B.V. ; JAMES HARDIE TECHNOLOGY LTD ; JAMES HARDIE RESEARCH PTYLIMITED ; JAMES HARDIE RESEARCH PTY LTD ; JAMES HARDIE INTERNATIONAL FINANCE B V ; JAMES HARDIE INT FINANCE B ; JAMES HARDIE INT

Inventor(s): (std): CHONGJUN JIANG ; JIANG CHONGJUN ; JIANG CHON GJUN

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; SMART AND BIGGAR; SARGENT; KNOBBE MARTENS OLSON AND

BEAR LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR034212 AA	20040204	LSPB	+	published / reissued	
AR034212 AA	20080930	LSGT	+FG	GRANT, REGISTRATION	
AU2002302913 AA	20020919	LSPB	+	published / reissued	
AU2002302913 BB	20080124	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2002302913 BB	20041125	LSAS	PC1	ASSIGNMENT BEFORE GRANT (SECT. 113)	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V. DESCRIPTION : FORMER APPLICANT(S): JAMES HARDIE RESEARCH PTY LIMITED
AU2002302913 BB	20080522	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2002302913 BB	20100826	LSAS	PC	ASSIGNMENT REGISTERED	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED DESCRIPTION : FORMER OWNER WAS: JAMES HARDIE INTERNATIONAL FINANCE B.V.
AU2002302913 BB	20110929	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
BRPI0207887 A	20040323	LSPB	+	published / reissued	
BRPI0207887 A	20060725	LSAS	B25A	REQUESTED TRANSFER OF RIGHTS APPROVED	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V. (NL) DESCRIPTION : TRANSFERIDO DE: JAMES HARDIE RESEARCH PTY LIMITED
BRPI0207887 A	20090714	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0207887 A	20100202	LSRV	B09B	DECISION: REFUSAL	DESCRIPTION : INDEFIRO O PEDIDO DE ACORDO COM O(S) ARTIGO(S) 80 DA LPI.
BRPI0207887 A	20100622	LSRV	B09B	DECISION: REFUSAL	DESCRIPTION : MANTIDO O INDEFERIMENTO UMA VEZ QUE NAO FOI APRESENTADO RECURSO DENTRO DO PRAZO LEGAL.
CA2439660 AA	20030829	LSPB	+	published / reissued	
CA2439660 AA	20030829	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2439660 AA	20070220	LSES	+EEER	EXAMINATION REQUEST	
CA2439660 AA	20100930	LSLE	-FZDE	DEAD	
CA2439660 AA	20110111	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20100930
CL2002000413 A1	20030325	LSPB	+	published / reissued	
CN1543444 A	20041103	LSPB	+	published / reissued	
CN1543444 A	20041103	LSPB	+C06	PUBLICATION	
CN1543444 A	20050706	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	OWNER NAME : JAMES HARDIE INTERNAT FINANCE DESCRIPTION : FORMER OWNER: JAMES HARDIE RESEARCH PTY LTD. EFFECTIVE DATE : 20050603
CN1543444 A	20050706	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR	

UTILITY MODEL					
CN1543444 A	20091230	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CZ20032694 A3	20040714	LSPB	+	published / reissued	
EP1373160 A1	20040102	LSPB	+	published / reissued	
EP1373160 A1	20040102	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20030926
EP1373160 A1	20050928	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V.
EP1373160 A1	20060405	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20060222
EP1373160 A1	20060405	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 28/02 20060101ALI20060216BHEP
EP1373160 A1	20060405	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 22/06 20060101AFI20020913BHEP
EP1373160 A1	20060405	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 103/12 20060101ALI20060216BHEP
EP1373160 A1	20100707	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED
EP1373160 A1	20101215	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20100619
JP2005506262 T2	20050303	LSPB	+	published / reissued	
JP4220781 B2	20090204	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4220781 B2	20050303	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20050302
JP4220781 B2	20060928	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20060927
JP4220781 B2	20061025	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20060927
JP4220781 B2	20080626	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080625
JP4220781 B2	20080926	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080925
JP4220781 B2	20081015	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4220781 B2	20081023	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20081022
JP4220781 B2	20081030	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4220781 B2	20081120	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20081114
JP4220781 B2	20081121	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20111121 YEAR OF FEE PAYMENT : 3
JP4220781 B2	20081121	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4220781 B2	20110419	LSAS	S111	REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R313113
JP4220781 B2	20110518	LSAS	R350	WRITTEN NOTIFICATION OF	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R350

					REGISTRATION OF TRANSFER
JP4220781 B2	20111121	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
KR20040030525 A	20040409	LSPB	+	published / reissued	
KR20040030525 A	20070305	LSES	A201	REQUEST FOR EXAMINATION	
KR20040030525 A	20080922	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20040030525 A	20090121	LSRE	AMND	AMENDMENT	
KR20040030525 A	20090210	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20090012372 A	20090203	LSPB	+	published / reissued	
KR20090012372 A	20090220	LSES	A201	REQUEST FOR EXAMINATION	
KR20090012372 A	20090407	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20090012372 A	20090616	LSRV	-E601	DECISION TO REFUSE APPLICATION	
MX264199 B	20090128	LSGT	+	granted / extensions (spc, cpc, pte)	
MX264199 B	20051004	LSAS	GB	TRANSFER OR ASSIGNMENT	
MX264199 B	20090128	LSGT	+FG	GRANT OR REGISTRATION	
MXPA03007965 A1	20031204	LSPB	+	published / reissued	
MY129267 A	20070330	LSGT	+	granted / extensions (spc, cpc, pte)	
NZ528311 A	20061222	LSPB	+	published / reissued	
NZ528311 A	20041224	LSAS	ASS	CHANGE OF OWNERSHIP	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V., NL DESCRIPTION : OLD OWNER(S): JAMES HARDIE RESEARCH PTY LIMITED
NZ528311 A	20060331	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	
NZ528311 A	20070427	LSGT	+PSEA	PATENT SEALED	
NZ528311 A	20100626	LSAS	ASS	CHANGE OF OWNERSHIP	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED, IE DESCRIPTION : OLD OWNER(S): JAMES HARDIE INTERNATIONAL FINANCE B.V.
PL364824 A1	20041227	LSPB	+	published / reissued	
PL364824 A1	20100831	LSWD	-DISC	DECISIONS ON DISCONTINUANCE OF THE PROCEEDINGS (TAKEN AFTER THE PUBLICATION OF THE PARTICULARS OF THE APPLICATIONS)	
TH59176 A	20031030	LSPB	+	published / reissued	
TWI239323 B	20050911	LSGT	+	granted / extensions (spc, cpc, pte)	
TWI239323 B	20100621	LSLE	-MM4A	ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES	
TWI239323 B	20100621	LSLE	-MM4A	ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES	
US2002166479 AA	20021114	LSPB	+	published / reissued	
US7041167 BB	20060509	LSGT	+	granted / extensions (spc, cpc, pte)	
US7041167 BB	20020419	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE RESEARCH PTY. LTD., AUSTRALIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JIANG, CHONGJUN; REEL/FRAME:012794/0565 EFFECTIVE DATE : 20020312

US7041167 BB	20050228	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V., NETHERLAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE RESEARCH PTY LIMITED; REEL/FRAME:016353/0550 EFFECTIVE DATE : 20050207
US7041167 BB	20050228	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V.,NETHERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE RESEARCH PTY LIMITED; REEL/FRAME:016353/0550 EFFECTIVE DATE : 20050207
US7041167 BB	20050228	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V.,NETHERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE RESEARCH PTY LIMITED; US-ASSIGNMENT DATABASE UPDATED:20100223; REEL/FRAME:16353/550 EFFECTIVE DATE : 20050207
US7041167 BB	20050328	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V.,NETHERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE RESEARCH PTY LIMITED; US-ASSIGNMENT DATABASE UPDATED:20100223; REEL/FRAME:15962/390 EFFECTIVE DATE : 20050207
US7041167 BB	20050328	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V., NETHERLAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE RESEARCH PTY LIMITED; REEL/FRAME:015962/0390 EFFECTIVE DATE : 20050207
US7041167 BB	20050328	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE INTERNATIONAL FINANCE B.V.,NETHERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE RESEARCH PTY LIMITED; REEL/FRAME:015962/0390 EFFECTIVE DATE : 20050207
US7041167 BB	20091007	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7041167 BB	20100318	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED,IRELAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE INTERNATIONAL FINANCE B.V.; REEL/FRAME:024103/0809 EFFECTIVE DATE : 20091215
US7041167 BB	20100318	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED, IRELAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE INTERNATIONAL FINANCE B.V.; REEL/FRAME:024103/0809 EFFECTIVE DATE : 20091215
US7041167 BB	20100318	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED,IRELAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE INTERNATIONAL FINANCE B.V.; US-ASSIGNMENT DATABASE UPDATED:20100511; REEL/FRAME:24103/809 EFFECTIVE DATE : 20091215

US7041167 BB	20100318	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED,IRELAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE INTERNATIONAL FINANCE B.V.; US-ASSIGNMENT DATABASE UPDATED:20100322; REEL/FRAME:24103/809 EFFECTIVE DATE : 20091215
US7041167 BB	20100318	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED,IRELAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE INTERNATIONAL FINANCE B.V.; US-ASSIGNMENT DATABASE UPDATED:20100405; REEL/FRAME:24103/809 EFFECTIVE DATE : 20091215
US7041167 BB	20100318	LSAS	AS	ASSIGNMENT	OWNER NAME : JAMES HARDIE TECHNOLOGY LIMITED,IRELAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:JAMES HARDIE INTERNATIONAL FINANCE B.V.; REEL/FRAME:24103/809 EFFECTIVE DATE : 20091215
US7041167 BB	20131009	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
WO02070425 A1	20020912	LSPB	+	published / reissued	
WO02070425 A1	20030829	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1-2003-500810 COUNTRY OF REF DOCUMENT : PH
WO02070425 A1	20030829	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2439660 COUNTRY OF REF DOCUMENT : CA
WO02070425 A1	20030904	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002569753 COUNTRY OF REF DOCUMENT : JP
WO02070425 A1	20030904	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020037011598 COUNTRY OF REF DOCUMENT : KR
WO02070425 A1	20030918	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 528311 COUNTRY OF REF DOCUMENT : NZ
WO02070425 A1	20030918	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002302913 COUNTRY OF REF DOCUMENT : AU
WO02070425 A1	20030926	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002730614 COUNTRY OF REF DOCUMENT : EP
WO02070425 A1	20031003	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : PV2003-2694 COUNTRY OF REF DOCUMENT : CZ
WO02070425 A1	20031009	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 028079604 COUNTRY OF REF DOCUMENT : CN
WO02070425 A1	20040102	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002730614 COUNTRY OF REF DOCUMENT : EP
WO02070425 A1	20040122	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO02070425 A1	20040409	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN	REF DOCUMENT NUMBER : 1020037011598

				NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : KR
WO02070425 A1	20040714	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : PV2003-2694 COUNTRY OF REF DOCUMENT : CZ
WO02070425 A1	20080124	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2002302913 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20020304 KIND CODE OF REF DOCUMENT : B

Title: SOLIDIFICATION AND HARDENING ACCELERATOR FOR HYDRAULIC BINDERS AND PROCESS FOR ITS PREPARATION

Abstract: Source: US2010018440A The present invention relates to a fluoride-free solidification and hardening accelerator for hydraulic binders, comprising sulfate, aluminium and organic acid, the molar ratio of aluminium to sulfate being less than 0.83.

Classifications:

International (IPC 8-9): C04B103/12 C04B103/14 C04B14/00 C04B14/06 C04B14/30 C04B14/48 C04B16/00 C04B18/14 C04B22/04 C04B22/06 C04B22/08 C04B22/14 C04B24/00 C04B24/02 C04B24/04 C04B24/12 C04B28/02 C04B28/30 C04B40/00 C04B7/00 C04B9/00 (Advanced/Invention); C04B103/12 C04B103/14 C04B111/00 C04B111/10 (Advanced/Non-invention); C04B14/02 C04B18/04 C04B22/00 C04B24/00 C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): C04B103/12 C04B28/02 C04B40/00

CPC: Y02W30/94 C04B40/0039 C04B2103/12 C04B2103/14 C04B2111/00146 C04B2111/1068

European: C04B40/00D4 M04B103/12 M04B103/14 M04B111/00M16 M04B111/10K2

US: 106/640 106/724 106/727 106/801 106/810 106/823 106/823S

Family:

Publication number	Publication date	Application number	Application date
AU2008214598 AA	20080821	AU20080214598	20080213
BRPI0807674 A2	20140520	BR2008PI07674	20080213
CA2677778 AA	20090810	CA20082677778	20080213
CA2677778 C	20150331	CA20082677778	20080213
CL2008000453 A1	20081107	CL20080000453	20080213
CN101605737 A	20091216	CN200880004729	20080213
CN101605737 B	20130417	CN200880004729	20080213
EP1964824 A1	20080903	EP20070102295	20070213
EP2121541 A1	20091125	EP20080716832	20080213
IN02873KN2009 A	20090911	IN2009KN02873	20090810
JP2010517923 T2	20100527	JP20090549826T	20080213
MX20090008651 A1	20090911	MX20090008651	20080213
US2010018440 AA	20100128	US20080449471	20080213
US8221543 BB	20120717	US20080449471	20080213
WO08098961 A1	20080821	WO2008EP51742	20080213

Priority:

EP20070102295 20070213 EP20080716832 20080213 WO2008EP51742 20080213

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): FLATT ROBERT ; LINDLAR BENEDIKT ; LOOTENS DIDIER ; SCHUERCH HEINZ ; SIKA TECHNOLOGY AG ; WOMBACHER FRANZ

Inventor(s): (std): BENEDIKT LINDLAR ; DIDIER LOOTENS ; FLATT ROBERT ; FRANZ WOMBACHER ; HEINZ SCHUERCH ; HEINZ SCHURCH ; LINDLAR BENEDIKT ; LOOTENS DIDIER ; PLATT ROBERT ; ROBERT FLATT ; SCHUERCH HEINZ ; SCHURCH HEINZ ; WOMBACHER FRANZ

Inventor(s): ROBERT PLATT

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; GOWLING LAFLEUR HENDERSON LLP; JOHANSSON; SIKA PATENT ATTORNEYS; OLIFF AND BERRIDGE PLC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
AU2008214598 AA	20080821	LSPB	+	published / reissued	
AU2008214598 AA	20140911	LSLE	-MK4	APPLICATION LAPSED SECTION 142(2)(D) - NO CONTINUATION FEE PAID FOR THE APPLICATION	
BRPI0807674 A2	20140520	LSPB	+	published / reissued	
BRPI0807674 A2	20140826	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	DESCRIPTION : REFERENTE A 6A ANUIDADE.
BRPI0807674 A2	20141230	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART.	DESCRIPTION : REFERENTE AO DESPACHO 8.6 PUBLICADO NA RPI 2277 DE 26/08/2014.

87)					
CA2677778 AA	20090810	LSPB	+	published / reissued	
CA2677778 AA	20090810	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2677778 AA	20130208	LSSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20130130
CA2677778 C	20150331	LSGT	+	granted / extensions (spc, cpc, pte)	
CL2008000453 A1	20081107	LSPB	+	published / reissued	
CN101605737 A	20091216	LSPB	+	published / reissued	
CN101605737 A	20091216	LSPB	+C06	PUBLICATION	
CN101605737 A	20130417	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN101605737 B	20130417	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1964824 A1	20080903	LSPB	+	published / reissued	
EP1964824 A1	20090506	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	
EP1964824 A1	20090902	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20090304
EP2121541 A1	20091125	LSPB	+	published / reissued	
EP2121541 A1	20091125	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090914
EP2121541 A1	20100120	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20091216
EP2121541 A1	20101222	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20100629
IN02873KN2009 A	20090911	LSPB	+	published / reissued	
JP2010517923 T2	20100527	LSPB	+	published / reissued	
JP2010517923 T2	20120208	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120207
JP2010517923 T2	20120208	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120207
JP2010517923 T2	20120808	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120807
JP2010517923 T2	20131030	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20131029
MX2009008651 A1	20090911	LSPB	+	published / reissued	
US2010018440 AA	20100128	LSPB	+	published / reissued	
US2010018440 AA	20090812	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: SCHURCH, HEINZ; WOMBACHER, FRANZ; LINDLAR, BENEDIKT; AND OTHERS; REEL/FRAME: 023082/0014; SIGNING DATES FROM 20090720 TO 20090811
US8221543 BB	20120717	LSGT	+	granted / extensions (spc, cpc, pte)	
US8221543 BB	20090812	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: SCHURCH, HEINZ;

					WOMBACHER, FRANZ; LINDLAR, BENEDIKT; AND OTHERS; REEL/FRAME:023082/0014; SIGNING DATES FROM 20090720 TO 20090811
US8221543 BB	20090812	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: SCHURCH, HEINZ; WOMBACHER, FRANZ; LINDLAR, BENEDIKT; AND OTHERS; SIGNING DATES FROM 20090720 TO 20090811; REEL/FRAME:023082/0014
US8221543 BB	20120627	LSGT	PAT1	Patented Case	
US8221543 BB	20160111	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
WO08098961 A1	20080821	LSPB	+	published / reissued	
WO08098961 A1	20090810	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2677778 COUNTRY OF REF DOCUMENT : CA
WO08098961 A1	20090811	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008214598 COUNTRY OF REF DOCUMENT : AU
WO08098961 A1	20090812	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009549826 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO08098961 A1	20090812	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12449471 COUNTRY OF REF DOCUMENT : US
WO08098961 A1	20090814	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08098961 A1	20090903	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2008214598 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20080213 KIND CODE OF REF DOCUMENT : A
WO08098961 A1	20140520	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0807674 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20090811

Title: ADDITIVE FOR HYDRAULIC BINDING AGENT WITH LONG PROCESSING TIME AND HIGH EARLY STRENGTH

Abstract: Source: US2011067604A Exemplary embodiments as disclosed herein are directed to setting and curing accelerators for hydraulic binders, including at least one ester of a polyhydric alcohol with an acid and/or salts thereof, where the acid is a phosphoric acid, phosphorous acid or a C₂ to C₂₀ carboxylic acid. Compositions including at least one accelerator as disclosed herein can accelerate the setting and curing of hydraulic binders and mortar or concrete produced therefrom, such as quick-setting cement. Methods for accelerating the setting and curing of hydraulic binders and mortar or concrete produced therefrom are also disclosed.

Classifications:

International (IPC 8-9): C04B103/00 C04B103/12 C04B103/14 C04B18/00 C04B22/08 C04B22/16 C04B24/00 C04B24/02 C04B24/04 C04B24/18 C04B24/22 C04B24/26 C04B24/30 C04B28/02 C08K3/32 C08K5/5333 C08L87/00 (Advanced/Invention); C04B103/00 C04B103/10 C04B103/12 C04B103/14 (Advanced/Non-invention); C04B24/00 (Core/Invention)

CPC: C04B24/003 C04B24/045 C04B24/085 C04B40/0039 C04B2103/12 C04B2103/14 C04B28/04

European: C04B24/00D C04B24/04B C04B24/08B C04B28/04 C04B40/00D4 M04B103/12 M04B103/14

US: 106/717 106/724 106/728 106/802 106/806 106/810 106/823 106/823S

Family:

Publication number	Publication date	Application number	Application date
AU2009253052 AA	20091203	AU20090253052	20090529
AU2009253052 BB	20150205	AU20090253052	20090529
BRPI0911751 A2	20151006	BR2009PI11751	20090529
CN102026933 A	20110420	CN200980116806	20090529
CN102026933 B	20131030	CN200980116806	20090529
EP2128110 A1	20091202	EP20080157144	20080529
EP2128110 B1	20160817	EP20080157144	20080529
JP2011522768 T2	20110804	JP20110511018T	20090529
JP2014221715 A2	20141127	JP20140142982	20140711
KR20110015020 A	20110214	KR20107029119	20090529
MX2010012306 A1	20110125	MX20100012306	20090529
US2011067604 AA	20110324	US20100955414	20101129
US8092592 BB	20120110	US20100955414	20101129
WO09144293 A1	20091203	WO2009EP56586	20090529

Priority:

EP20080157144 20080529 JP20110511018 20090529 WO2009EP56586 20090529
JP20110511018T 20090529

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): BUERGE CHRISTIAN ; PETER ANDRE ; SIKA TECHNOLOGY AG ; WOMBACHER FRANZ

Inventor(s): (std): BUERGE CHRISTIAN ; BURGE CHRISTIAN ; PETER ANDRA ; PETER ANDRE ; WOMBACHER FRANZ ; FRANZ WOMBACHER ; CHRISTIAN BUERGE ; ANDRE PETER

Inventor(s): ANDRA PETER

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; SIKA PATENT ATTORNEYS; AOKI ATSUSHI; KOGA TETSUJI; ISHIDA TAKASHI; BUCHANAN INGERSOLL AND ROONEY PC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2009253052 AA	20091203	LSPB	+	published / reissued	
AU2009253052 AA	20150604	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2009253052 BB	20150205	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0911751 A2	20151006	LSPB	+	published / reissued	
CN102026933 A	20110420	LSPB	+	published / reissued	
CN102026933 A	20110420	LSPB	+C06	PUBLICATION	
CN102026933 A	20131030	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102026933 B	20131030	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2128110 A1	20091202	LSPB	+	published /	

reissued					
EP2128110 A1	20100714	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100602
EP2128110 A1	20100728	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20100625
EP2128110 A1	20100811	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	COUNTRY OF REF DOCUMENT : AT COUNTRY OF REF DOCUMENT : BE COUNTRY OF REF DOCUMENT : BG COUNTRY OF REF DOCUMENT : CH COUNTRY OF REF DOCUMENT : CY COUNTRY OF REF DOCUMENT : CZ COUNTRY OF REF DOCUMENT : DE COUNTRY OF REF DOCUMENT : DK COUNTRY OF REF DOCUMENT : EE COUNTRY OF REF DOCUMENT : ES COUNTRY OF REF DOCUMENT : FI COUNTRY OF REF DOCUMENT : FR COUNTRY OF REF DOCUMENT : GB COUNTRY OF REF DOCUMENT : GR COUNTRY OF REF DOCUMENT : HR COUNTRY OF REF DOCUMENT : HU COUNTRY OF REF DOCUMENT : IE COUNTRY OF REF DOCUMENT : IS COUNTRY OF REF DOCUMENT : IT COUNTRY OF REF DOCUMENT : LI COUNTRY OF REF DOCUMENT : LT COUNTRY OF REF DOCUMENT : LU COUNTRY OF REF DOCUMENT : LV COUNTRY OF REF DOCUMENT : MC COUNTRY OF REF DOCUMENT : MT COUNTRY OF REF DOCUMENT : NL COUNTRY OF REF DOCUMENT : NO COUNTRY OF REF DOCUMENT : PL COUNTRY OF REF DOCUMENT : PT COUNTRY OF REF DOCUMENT : RO COUNTRY OF REF DOCUMENT : SE COUNTRY OF REF DOCUMENT : SI COUNTRY OF REF DOCUMENT : SK COUNTRY OF REF DOCUMENT : TR
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EP2128110 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817
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JP2011522768 T2	20130710	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130709
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JP2011522768 T2	20140312	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20140311
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JP2014221715 A2	20150408	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20150407
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JP2014221715 A2	20150909	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20150908
KR20110015020 A	20110214	LSPB	+	published / reissued	

KR20110015020 A	20140630	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION	
MX2010012306 A1	20110125	LSPB	+	published / reissued	
MX2010012306 A1	20120426	LSGT	+FG	GRANT OR REGISTRATION	
US2011067604 AA	20110324	LSPB	+	published / reissued	
US2011067604 AA	20101129	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BUERGE, CHRISTIAN; WOMBACHER, FRANZ; PETER, ANDRE; REEL/FRAME:025427/0612 EFFECTIVE DATE : 20101125
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US8092592 BB	20101129	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BUERGE, CHRISTIAN; WOMBACHER, FRANZ; PETER, ANDRE; REEL/FRAME:025427/0612 EFFECTIVE DATE : 20101125
US8092592 BB	20111221	LSGT	PAT1	Patented Case	
US8092592 BB	20150703	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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WO09144293 A1	20101126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011511018 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
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WO09144293 A1	20101222	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009253052 COUNTRY OF REF DOCUMENT : AU
WO09144293 A1	20101224	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20107029119 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A
WO09144293 A1	20110127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009253052 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090529 KIND CODE OF REF DOCUMENT : A
WO09144293 A1	20110629	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 09753948 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO09144293 A1	20151006	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0911751 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20101126

Title: LOW DENSITY CEMENTITIOUS COMPOSITIONS USING LIMESTONE

Abstract: Source: US2012012315A A manufactured cementitious binder includes a hydraulic binder in an amount in the range of from 40 to 75 percent by weight of the cementitious binder; metakaolin in an amount in the range of from 1 to 30 percent by weight of the cementitious binder; silica fume in an amount up to 15 percent by weight of the cementitious binder; limestone in an amount of from 5 to 30 percent by weight of the cementitious binder, and a cementitious accelerator in a controlled amount of at least 0.5 percent by weight of the cementitious binder, the cementitious binder providing a cementitious settable composition when added with water, wherein for a density lower than 13 pounds per gallon and of at least 11 pounds per gallon obtained without a lightweight additive, said cementitious settable composition exhibits a 24 hour compressive strength at 100 F, as hardened, of at least 500 psi.

Classifications:

International (IPC 8-9): C04B14/00 C04B14/04 C04B14/10 C04B20/00 C04B28/00 C04B28/02 C04B28/04 C04B28/06 C04B40/00 C04B7/02 C09K8/473 E21B33/00 E21B33/10 E21B33/14 (Advanced/Invention); C04B111/00 C04B111/40 C04B111/74 (Advanced/Non-invention)

CPC: C04B18/146 C04B14/108 C04B14/106 C04B22/008 C04B22/142 C04B14/06 C04B14/28 C04B14/16 C04B2103/10 C04B38/10 C04B2103/12 C04B18/08 C04B14/26 C04B2103/14 C04B22/124 C04B18/162 C04B14/08 C04B14/02 C04B28/02 C04B28/04 C04B28/06 C04B40/0028 C04B2111/00068 C04B2111/00146 C04B2111/40 C04B2111/74 C04B2201/20 C09K8/473 Y02W30/92 Y02W30/94 Y02W30/95

European: C04B28/02 C09K8/473 M04B111/40

US: 106/681 106/681S 106/713 106/718 106/721 106/721S 106/737 106/738 166/285

Family:

Publication number	Publication date	Application number	Application date
AR082207 AA	20121121	AR2011P102492	20110711
BR112013000838 A2	20160517	BR20131100838	20110714
CA2746034 AA	20120115	CA20112746034	20110711
CO6680608 A2	20130531	CO20130004228	20130110
EP2593635 A2	20130522	EP20110807509	20110714
EP2593635 A4	20140416	EP20110807509	20110714
MX2013000581 A1	20130307	MX20130000581	20110714
US2012012315 AA	20120119	US20110182848	20110714
US8858704 BB	20141014	US20110182848	20110714
WO12009536 A2	20120119	WO2011US44006	20110714
WO12009536 A3	20130425	WO2011US44006	20110714

Priority:

CA20112746034 20110711 US20100364736P 20100715 US20110182848 20110714
WO2011US44006 20110714

Probable Assignee: LAFARGE SA

Assignee(s): (std): CARRUTHERS BILL ; DADERKO GREG ; LEHOUX PAUL ; LAFARGE SA ; WOYTOWICH WES

Assignee(s): LAFARGE ; LAFARGE NORTH AMERICA INC

Inventor(s): (std): WOYTOWICH WES ; LEHOUX PAUL ; DADERKO GREG ; CARRUTHERS BILL

Inventor(s): BILL CARRUTHERS ; GREG DADERKO ; WES WOYTOWICH ; PAUL LEHOUX

Agent(s): NORTON ROSE CANADA SENCRL SRL LLP; JUAN PABLO CADENA SARMIENTO; MERIGEALT SHONA; PILLSBURY WINTHROP SHAW PITTMAN LLP; LAIR CHRISTOPHE F ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
AR082207 AA	20121121	LSPB	+	published / reissued	
BR112013000838 A2	20160517	LSPB	+	published / reissued	
CA2746034 AA	20120115	LSPB	+	published / reissued	
CA2746034 AA	20160713	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20160705
CO6680608 A2	20130531	LSPB	+	published / reissued	
EP2593635 A2	20130522	LSPB	+	published / reissued	
EP2593635 A2	20130529	LSES	R17D	SEARCH REPORT (CORRECTION)	EFFECTIVE DATE : 20130425
EP2593635 A2	20131204	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20131025
EP2593635 A2	20140416	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20140319
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				(CORRECTION)	CLASSIFICATIONSCHEME : C09K 8/473 20060101ALI20140313BHEP
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EP2593635 A2	20170125	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20170105
MX2013000581 A1	20130307	LSPB	+	published / reissued	
US2012012315 AA	20120119	LSPB	+	published / reissued	
US2012012315 AA	20140912	LSAS	AS	ASSIGNMENT	OWNER NAME : LAFARGE NORTH AMERICA INC., VIRGINIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:WOYTOWICH, WES; REEL/FRAME:033734/0662 EFFECTIVE DATE : 20110620
US2012012315 AA	20140912	LSAS	AS	ASSIGNMENT	OWNER NAME : LAFARGE, FRANCE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:LAFARGE NORTH AMERICA INC.; REEL/FRAME:033734/0677 EFFECTIVE DATE : 20110624
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US8858704 BB	20141014	LSGT	+	granted / extensions (spc, cpc, pte)	

US8858704 BB	20140924	LSGT	PAT1	Patented Case	
WO12009536 A2	20120119	LSPB	+	published / reissued	
WO12009536 A3	20130115	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12009536 A3	20160517	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112013000838 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20130111

Title: HARDENING ACCELERATOR FOR MINERAL BINDER COMPOSITIONS

Abstract: Source: US2014076205A A hardening accelerator for mineral binder compositions, in particular for cementitious binder compositions, is provided. The hardening accelerator contains a combination of a) a first amino alcohol (A) including at least one primary alcohol group, and b) a second amino alcohol (E) including at least one secondary alcohol group.

Classifications:

International (IPC 8-9): C04B24/12 C04B24/28 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention); C04B103/14 (Advanced/Non-invention)

CPC: C04B24/283 C04B24/121 C04B24/122 C04B28/04 C04B40/0039 C04B2103/14 C04B24/2647

European: C04B24/12D C04B28/04 C04B40/00D4 M04B103/14

US: 1/1 106/808 106/823 524/249

Family:

Publication number	Publication date	Application number	Application date
CN103502185 A	20140108	CN201280019854	20120525
CN103502185 B	20160914	CN201280019854	20120525
EP2527310 A1	20121128	EP20110167672	20110526
EP2714622 A1	20140409	EP20120725357	20120525
US2014076205 AA	20140320	US20130090639	20131126
US9233876 BB	20160112	US20130090639	20131126
WO12160208 A1	20121129	WO2012EP59904	20120525

Priority:

EP20110167672 20110526 EP20120725357 20120525 WO2012EP59904 20120525

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): BUERGE CHRISTIAN ; KURZ CHRISTOPHE ; MAEDER GILBERT ; MARAZZANI BEAT ; SIKA TECHNOLOGY AG

Inventor(s): (std): BUERGE CHRISTIAN ; KURZ CHRISTOPHE ; MAEDER GILBERT ; MARAZZANI BEAT

Agent(s): SIKA PATENT ATTORNEYS; BUCHANAN INGERSOLL AND ROONEY PC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN103502185 A	20140108	LSPB	+	published / reissued	
CN103502185 A	20140108	LSPB	+C06	PUBLICATION	
CN103502185 A	20160914	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103502185 B	20160914	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2527310 A1	20121128	LSPB	+	published / reissued	
EP2527310 A1	20121212	LSWD	-18W	WITHDRAWN	EFFECTIVE DATE : 20121031
EP2714622 A1	20140409	LSPB	+	published / reissued	
EP2714622 A1	20140409	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140102
US2014076205 AA	20140320	LSPB	+	published / reissued	
US2014076205 AA	20131126	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MARAZZANI, BEAT; BURGE, CHRISTIAN; KURZ, CHRISTOPHE; AND OTHERS; REEL/FRAME:031680/0176 EFFECTIVE DATE : 20131112
US9233876 BB	20160112	LSGT	+	granted / extensions (spc, cpc, pte)	
US9233876 BB	20151222	LSGT	PAT1	Patented Case	

WO12160208 A1	20121129	LSPB	+	published / reissued	
WO12160208 A1	20131126	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: ADJUVANT FOR HYDRAULIC COMPOSITIONS**Abstract:** Source: US2015075409A The invention is mainly directed to an admixture in the form of an aqueous dispersion, comprising: mineral nanoparticles; an accelerator for setting hydraulic compositions; and a dispersant polymer, wherein the pH is comprised between 2 and 11, to a method for its preparation as well as to the preparation of a hydraulic composition as well as to its use for accelerating the setting of hydraulic compositions.**Classifications:****International (IPC 8-9):** B82Y30/00 C04B103/12 C04B103/40 C04B14/02 C04B14/04 C04B22/08 C04B24/02 C04B24/12 C04B24/16 C04B24/24 C04B28/04 C04B40/00 (Advanced/Invention); C04B103/12 C04B103/40 (Advanced/Non-invention)**CPC:** C04B2103/0094 C04B2103/12 C04B24/16 C04B24/02 C04B14/04 C04B28/04 Y02W30/94 C04B40/0039**US:** 106/810 106/823**Family:**

Publication number	Publication date	Application number	Application date
CA2868693 AA	20140926	CA20132868693	20130405
EP2834207 A1	20150211	EP20130714310	20130405
FR2989082 A1	20131011	FR20120053165	20120405
FR2989082 B1	20150313	FR20120053165	20120405
US2015075409 AA	20150319	US20130390683	20130405
WO13150145 A1	20131010	WO2013EP57231	20130405

Priority:

FR20120053165 20120405 WO2013EP57231 20130405

Probable Assignee: CHRYSO**Assignee(s):** (std): CHRYSO ; CHRYSO SAS**Assignee(s):** CHRYSO19 PLACE DE LA RESISTANCEFR-92440ISSY LES MOULINEAUXFR ; DARGUY SANDRA ; BABAYAN DAVID**Inventor(s):** (std): DARGUY SANDRA ; BABAYAN DAVID**Inventor(s):** BABAYAN DAVIDCH ; DARGUY SANDRAFR ; DAVID BABAYAN ; SANDRA DARGUY**Agent(s):** ROBIC; BLOT PHILIPPE ROBERT EMILE; CABINET LAVOIX; BLOT PHILIPPE ET AL**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**Legal status (INPADOC)**[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
CA2868693 AA	20140926	LSPB	+	published / reissued	
EP2834207 A1	20150211	LSPB	+	published / reissued	
EP2834207 A1	20150211	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140925
FR2989082 A1	20131011	LSPB	+	published / reissued	
FR2989082 A1	20160330	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 5
FR2989082 A1	20170420	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 6
FR2989082 B1	20150313	LSGT	+	granted / extensions (spc, cpc, pte)	
US2015075409 AA	20150319	LSPB	+	published / reissued	
US2015075409 AA	20141117	LSAS	AS	ASSIGNMENT	OWNER NAME : CHRYSO, FRANCE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:DARGUY, SANDRA; BABAYAN, DAVID; SIGNING DATES FROM 20140930 TO 20141010; REEL/FRAME:034189/0940
US2015075409 AA	20170328	LSSES	NFA1	Non Final Action Mailed	
WO13150145 A1	20131010	LSPB	+	published / reissued	
WO13150145 A1	20140926	LSNP	ENP	ENTRY INTO THE NATIONAL	REF DOCUMENT NUMBER : 2868693 COUNTRY OF REF DOCUMENT : CA

WO13150145 A1	20141006	LSNE	NENP	PHASE IN:	REF COUNTRY CODE : DE
				NON-ENTRY INTO THE NATIONAL PHASE IN:	

Title: AQUEOUS SUSPENSION BASED ON ALKALINE ALUMINIUM POLYSULPHATE, PREPARATION METHOD AND USE IN THE FIELD OF BUILDING MATERIALS

Abstract: Source: US6423133B The present invention relates to an aqueous suspension comprising: A) silica and/or alumina particles, and B) a compound of overall formula (I): with: a between 0.1 and 2, b between 0.3 and 1.5, c between 0 and 0.1, d greater than 0.05, Y chosen from alkali metals and alkaline earth metals, x between 2 and 4, and its derivatives, the said compound (B) being present in the suspension at a concentration of at least 1.65 mol/l, expressed as moles of aluminium issued from the said compound. Another subject-matter of the invention is a process useful for the preparation of the said suspension and its use in the field of cement pastes, mortars and concretes and in particular as setting and hardening accelerating agent for cements.

Classifications:

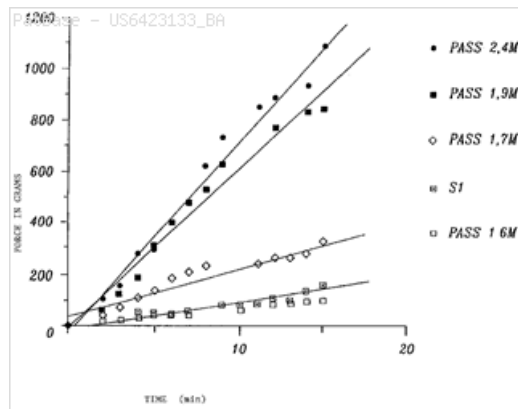
International (IPC 8-9): C01B33/141 C01B33/26 C01F7/02 C01F7/74 C04B14/06 C04B22/00 C04B22/14 C04B28/02 C04B40/00 (Advanced/Invention); C04B103/10 (Advanced/Non-invention); C01B33/00 C01F7/00 C04B22/00 C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): B01F3/12 B28B19/00 C01B33/141 C01B33/26 C01F11/46 C01F7/02 C01F7/74 C04B103/10 C04B103/12 C04B14/06 C04B22/06 C04B22/08 C04B22/14 C04B28/02 C04B40/00 D21H21/16

CPC: C04B22/00 C04B22/148 C04B40/0039 C04B2103/12 C04B2111/00155

European: C04B22/00 C04B22/14G6 C04B40/00D4 M04B103/12 M04B111/00M16B

US: 106/736 106/819 423/556 423/625 423/629



Family:

Publication number	Publication date	Application number	Application date
AU199894459 A1	19990427	AU19980094459	19981005
CA2305486 AA	20000327	CA19982305486	19981005
CA2305486 C	20030729	CA19982305486	19981005
EP1019333 A1	20000719	EP19980947601	19981005
FR2769308 A1	19990409	FR19970012374	19971003
FR2769308 B1	19991224	FR19970012374	19971003
JP2001519309 T2	20011023	JP20000514860T	19981005
US6423133 BA	20020723	US20000509784	20000615
WO9918045 A1	19990415	WO1998FR02122	19981005
ZA9808997 A	20000403	ZA19980008997	19981002

Priority:

FR19970012374 19971003 WO1998FR02122 19981005

Probable Assignee: RHODIA CHIMIE

Assignee(s): (std): CHANE CHING JEAN YVES ; PRAT EVELYNE ; RHODIA CHIMIE ; RHODIA CHIMIE SA ; RHONE POULENC CHIMIE ; TOUZET SYLVIE

Inventor(s): (std): CHANE CHING JEAN YVES ; EVELYNE PRAT ; JEAN YVES CHANE CHING ; PRAT EVELYNE ; SYLVIE TOUZET ; TOUZET SYLVIE

Agent(s): ROBIC

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG US UZ VN YU ZW

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Patent	Date recorded	Event group	Code	Event	Details
AU199894459 A1	19990427	LSPB	+	published / reissued	
AU199894459 A1	20000615	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
CA2305486 AA	20000327	LSPB	+	published / reissued	
CA2305486 AA	20000327	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2305486 AA	20010215	LSSES	+EEER	EXAMINATION REQUEST	
CA2305486 AA	20041005	LSLE	-MKLA	LAPSED	
CA2305486 C	20030729	LSGT	+	granted / extensions (spc, cpc, pte)	

EP1019333 A1	20000719	LSPB	+	published / reissued	
EP1019333 A1	20000719	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20000321
EP1019333 A1	20001206	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20001025
EP1019333 A1	20040609	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20031121
FR2769308 A1	19990409	LSPB	+	published / reissued	
FR2769308 A1	20040730	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2769308 B1	19991224	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2001519309 T2	20011023	LSPB	+	published / reissued	
US6423133 BA	20020723	LSGT	+	granted / extensions (spc, cpc, pte)	
US6423133 BA	20000615	LSAS	AS	ASSIGNMENT	OWNER NAME : RHODIA CHIMIE, FRANCE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:TOUZET, SYLVIE; CHANE-CHING, JEAN-YVES; PRAT, EVELYNE; REEL/FRA:010873/0613 EFFECTIVE DATE : 20000502
US6423133 BA	20060724	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6423133 BA	20060919	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20060723
WO9918045 A1	19990415	LSPB	+	published / reissued	
WO9918045 A1	20000321	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1998947601 COUNTRY OF REF DOCUMENT : EP
WO9918045 A1	20000327	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2305486 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9918045 A1	20000327	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2305486 COUNTRY OF REF DOCUMENT : CA
WO9918045 A1	20000403	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : KR
WO9918045 A1	20000615	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 09509784 COUNTRY OF REF DOCUMENT : US
WO9918045 A1	20000719	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1998947601 COUNTRY OF REF DOCUMENT : EP
WO9918045 A1	20000803	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO9918045 A1	20031121	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1998947601 COUNTRY OF REF DOCUMENT : EP
ZA9808997 A	20000403	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: METHOD FOR ACCELERATING SETTING OF CEMENT AND THE COMPOSITIONS PRODUCED THEREFROM

Abstract: Source: US6827776B The invention pertains to a method for producing rapid setting cement and to the compositions produced therefrom. The setting time of hydraulic cement compositions comprising Portland cement and fly ash can be accelerated by controlling the pH of an activator slurry used in the composition. The pH of the activator slurry is controlled by non-stoichiometrically balancing the accelerating salts therein such that the activator slurry is alkaline, or having a pH greater than 7. The slurry activator of the present invention generally includes a base component, an acid component, and water. The base component can include any basic alkali and alkaline earth metal hydroxide, or a salt of the acid component. The acid component may include a hydroxycarboxylic acid, preferably citric acid. Mortar and concrete compositions can be prepared with this hydraulic cement wherein the compositions can achieve high strengths in a short time.

Classifications:

International (IPC 8-9): C04B28/04 C04B40/00 (Advanced/Invention);
C04B28/00 C04B40/00 (Core/Invention)
International (IPC 1-7): C04B24/04
CPC: Y02W30/92 C04B40/0039 C04B28/04 C04B2103/12
European: C04B28/04 C04B40/00D4 M04B103/12
US: 106/728 106/819

Family:

Publication number	Publication date	Application number	Application date
US6827776 BA	20041207	US20020228008	20020826

Priority:

US20010314695P 20010824 US20020228008 20020826

Probable Assignee: HEADWATERS RESOURCES INC A UTAH CORP

Assignee(s): (std): ISG RESOURCES INC

Assignee(s): MORGAN STANLEY AND CO INC ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC AND INS ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC ; TAPCO INT ; HEADWATERS RESOURCES INC (SUCCESSOR TO JTM IND INC ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC (SUCCES ; TAPCO INT (SUCCESSOR TO MID AMERICA BUILDING PRODU ; TAPCO INT (SUCCESSOR TO TAPCO PRODUCTS CO INC) COR ; TAPCO INT CORP ; TAPCO INT CORPORATON (SUCCESSOR TO TAPCO PRODUCTS ; HEADWATERS RESOURCES INC SUCCESSOR TO JTM IND INC ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC SUCCESS ; HEADWATERS RESOURCES INC (SUCCESSOR TO JTM IND INC) ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC (SUCCESSOR TO HEADWATERS TECHNOLOGY INNOVATION LLC) ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC (SUCCESSOR TO HEADWATERS TECHNOLOGY INNOVATION LLC) AND INST OF COAL CHEMISTRY ; TAPCO INT (SUCCESSOR TO MID AMERICA BUILDING PRODUCTS) CORP ; TAPCO INT (SUCCESSOR TO TAPCO PRODUCTS CO INC) CORP ; HEADWATERS RESOURCES INC A UTAH CORP ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC A UTAH CORP ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC SUCCESSOR TO HEADWATERS TECHNOLOGY INNOVATION LLC ; HEADWATERS TECHNOLOGY INNOVATION GROUP INC SUCCESSOR TO HEADWATERS TECHNOLOGY INNOVATION LLC AND INST OF COAL CHEMISTRY ; TAPCO INT A MICHIGAN CORP ; WILMINGTON TRUST FSB COLLATERAL AGENT AS ; TAPCO INT CORPORATON SUCCESSOR TO TAPCO PRODUCTS C ; TAPCO INT SUCCESSOR TO MID AMERICA BUILDING PRODUC ; TAPCO INT SUCCESSOR TO TAPCO PRODUCTS CO INC CORP ; TAPCO INT CORPORATON (SUCCESSOR TO TAPCO PRODUCTS CO INC) ; TAPCO INT CORPORATON SUCCESSOR TO TAPCO PRODUCTS CO INC ; TAPCO INT SUCCESSOR TO MID AMERICA BUILDING PRODUCTS CORP ; BANK OF AMERICA NA ; BANK ONE NA ; CROZZOLI GUALTIERO ; CURTIS WRIGHT FLOW CONTROL CORP ; DEUTSCHE BANK NEW YORK BRANCH ADMINISTRATIVE AGENT AG AS ; HEADWATER RESOURCES INC ; HEADWATERS RESOURCES INC ; HEADWATERS CTL LLC ; HEADWATERS INC ; HEADWATERS CTL ; HEADWATER RESOURCES INC (SUCCESSOR TO JTM IND INC) ; HEADWATERS CTL LLC (SUCCESSOR TO HYDROCARBON TECHN ; HEADWATER RESOURCES INC SUCCESSOR TO JTM IND INC ; HEADWATERS CTL LLC SUCCESSOR TO HYDROCARBON TECHNO ; HEADWATERS CTL LLC (SUCCESSOR TO HYDROCARBON TECHNOLOGIES INC) ; HEADWATERS CTL LLC SUCCESSOR TO HYDROCARBON TECHNOLOGIES INC ; HEADWATERS HEAVY OIL LLC A UTAH CORP ; HEADWATERS INC GRANTOR AS

Inventor(s): (std): BOGGS BRUCE ; RHODES DOUGLAS

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US6827776 BA	20041207	LSGT	+	granted / extensions (spc, cpc, pte)	
US6827776 BA	20030122	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ISG RESOURCES, INC., UTAH OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOGGS, BRUCE; RHODES, DOUGLAS; REEL/FRAME:013685/0570 EFFECTIVE DATE : 20020906
US6827776 BA	20040423	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BANK ONE, NA, ILLINOIS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:ISG RESOURCES, INC.; REEL/FRAME:014556/0145 EFFECTIVE DATE : 20040331
US6827776 BA	20040908	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : ISG RESOURCES, INC., UTAH OLDPARTY : RELEASE OF SECURITY INTEREST; ASSIGNOR:BANK ONE, NA; REEL/FRAME:015093/0559

					EFFECTIVE DATE : 20040908
US6827776 BA	20041025	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MORGAN STANLEY & CO. INCORPORATED, NEW YORK OLDPARTY : SECURITY AGREEMENT; ASSIGNORS:HEADWATERS INCORPORATED; ACM BLOCK & BRICK GENERAL, INC.; ACM BLOCK & BRICK PARTNER, LLC.; AND OTHERS; REEL/FRAME:015896/0667 EFFECTIVE DATE : 20040908
US6827776 BA	20041028	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MORGAN STANLEY & CO. INCORPORATED, NEW YORK OLDPARTY : SECOND LIEN IP SECURITY AGREEMENT; ASSIGNORS:HEADWATERS INCORPORATED; ACM BLOCK & BRICK GENERAL, INC.; ACM BLOCK & BRICK PARTNER, LLC.; AND OTHERS; REEL/FRAME:015908/0816 EFFECTIVE DATE : 20040908
US6827776 BA	20050208	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS RESOURCES, INC., UTAH OLDPARTY : CHANGE OF NAME; ASSIGNOR:ISG RESOURCES, INC.; REEL/FRAME:015653/0844 EFFECTIVE DATE : 20040910
US6827776 BA	20050208	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS RESOURCES, INC.,UTAH OLDPARTY : CHANGE OF NAME; ASSIGNOR:ISG RESOURCES, INC.; REEL/FRAME:015653/0844 EFFECTIVE DATE : 20040910
US6827776 BA	20080430	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CURTIS-WRIGHT FLOW CONTROL CORPORATION, NEW JERSEY OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS CTL, LLC (SUCCESSOR TO HYDROCARBON TECH OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS TECHNOLOGY INNOVATION GROUP, INC. (SUCC OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CROZZOLI, GUALTIERO, ITALY OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS RESOURCES, INC. (SUCCESSOR TO JTM INDUS OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TAPCO INTERNATIONAL CORPORATION (SUCCESSOR TO MID OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TAPCO INTERNATIONAL

					CORPORATION (SUCCESSOR TO TAPC OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS INCORPORATED, UTAH OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS RESOURCES, INC., UTAH OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TAPCO INTERNATIONAL CORPORATION, MICHIGAN OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023438/0778 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CURTIS-WRIGHT FLOW CONTROL CORPORATION, NEW JERSEY OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS CTL., LLC (SUCCESSOR TO HYDROCARBON TEC OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS TECHNOLOGY INNOVATION GROUP, INC. (SUCC OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CROZZOLI, GUALTIERO, ITALY OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATER RESOURCES, INC. (SUCCESSOR TO JTM INDUST OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TAPCO INTERNATIONAL CORPORATION (SUCCESSOR TO MID OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TAPCO INTERNATIONAL CORPORATON (SUCCESSOR TO TAPCO OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER

					OWNER : HEADWATERS INCORPORATED, UTAH OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS RESOURCES, INC., UTAH OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091029	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TAPCO INTERNATIONAL CORPORATION, MICHIGAN OLDPARTY : RELEASE OF SECURITY AGREEMENT; ASSIGNOR:MORGAN STANLEY & CO. INCORPORATED; REEL/FRAME:023449/0740 EFFECTIVE DATE : 20091027
US6827776 BA	20091030	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BANK OF AMERICA, N.A., CALIFORNIA OLDPARTY : SECURITY AGREEMENT; ASSIGNORS:HEADWATERS INCORPORATED; TAPCO INTERNATIONAL CORPORATION; HEADWATERS RESOURCES, INC.; REEL/FRAME:023449/0470 EFFECTIVE DATE : 20091027
US6827776 BA	20091030	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BANK OF AMERICA, N.A., CALIFORNIA OLDPARTY : SECURITY AGREEMENT; ASSIGNORS:HEADWATERS INCORPORATED; TAPCO INTERNATIONAL CORPORATION; HEADWATERS RESOURCES, INC.; REEL/FRAME:023449/0470 EFFECTIVE DATE : 20091027
US6827776 BA	20091120	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST FSB, AS COLLATERAL AGENT, MINNESOTA OLDPARTY : SECURITY AGREEMENT; ASSIGNORS:HEADWATERS INCORPORATED, A DELAWARE CORPORATION; HEADWATERS CTL, LLC, A UTAH LIMITED LIABILITY COMPANY, USA; HEADWATERS HEAVY OIL, LLC, A UTAH LIMITED LIABILITY COMPANY, USA; AND OTHERS; REEL/FRAME:023699/0452 EFFECTIVE DATE : 20091027
US6827776 BA	20091120	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST FSB, AS COLLATERAL AGENT, MINNESOTA OLDPARTY : SECURITY AGREEMENT; ASSIGNORS:HEADWATERS INCORPORATED, A DELAWARE CORPORATION; HEADWATERS CTL, LLC, A UTAH LIMITED LIABILITY COMPANY, USA; HEADWATERS HEAVY OIL, LLC, A UTAH LIMITED LIABILITY COMPANY, USA; AND OTHERS; REEL/FRAME:023699/0452 EFFECTIVE DATE : 20091027
US6827776 BA	20120509	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6827776 BA	20150326	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS TECHNOLOGY INNOVATION GROUP, INC., A UT OLDPARTY : PATENT RELEASE (REEL:23699/FRAME:0452); ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION, AS COLLATERAL AGENT; REEL/FRAME:035306/0558 EFFECTIVE DATE : 20150324
US6827776 BA	20150326	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS INCORPORATED, AS GRANTOR, UTAH OLDPARTY : PATENT RELEASE (REEL:23699/FRAME:0452); ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION, AS COLLATERAL AGENT; REEL/FRAME:035306/0558 EFFECTIVE DATE : 20150324
US6827776 BA	20150326	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : TAPCO INTERNATIONAL CORPORATION, A MICHIGAN CORPORA

					OLDPARTY : PATENT RELEASE (REEL:23699/FRAME:0452); ASSIGNOR: WILMINGTON TRUST, NATIONAL ASSOCIATION, AS COLLATERAL AGENT; REEL/FRAME:035306/0558 EFFECTIVE DATE : 20150324
US6827776 BA	20150326	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS RESOURCES, INC., A UTAH CORPORATION, UT OLDPARTY : PATENT RELEASE (REEL:23699/FRAME:0452); ASSIGNOR: WILMINGTON TRUST, NATIONAL ASSOCIATION, AS COLLATERAL AGENT; REEL/FRAME:035306/0558 EFFECTIVE DATE : 20150324
US6827776 BA	20150326	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEADWATERS HEAVY OIL, LLC, A UTAH CORPORATION, UTA OLDPARTY : PATENT RELEASE (REEL:23699/FRAME:0452); ASSIGNOR: WILMINGTON TRUST, NATIONAL ASSOCIATION, AS COLLATERAL AGENT; REEL/FRAME:035306/0558 EFFECTIVE DATE : 20150324
US6827776 BA	20150327	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : DEUTSCHE BANK AG NEW YORK BRANCH, AS ADMINISTRATIV OLDPARTY : SECURITY AGREEMENT; ASSIGNORS: HEADWATERS INCORPORATED, AS GRANTOR; TAPCO INTERNATIONAL CORPORATION, A MICHIGAN CORPORATION; HEADWATERS HEAVY OIL, LLC, A UTAH CORPORATION; AND OTHERS; REEL/FRAME:035327/0462 EFFECTIVE DATE : 20150324
US6827776 BA	20161207	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6827776 BA	20170124	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20161207

Title: USE OF SUBSTANTIALLY HYDRATED CEMENT PARTICULATES IN CEMENTING AND SUBTERRANEAN APPLICATIONS

Abstract: Source: US2005173117A The present invention relates to substantially hydrated cement particulates. More particularly, the present invention relates to compositions comprising substantially hydrated cement particulates and associated methods of use in cementing and subterranean applications. These substantially hydrated cement particulates may be included in cement compositions and subterranean treatment fluids, inter alia, as carrier particles for admixtures, lost circulation materials, density-varying additives, proppants, and the like.

Classifications:

International (IPC 8-9): B02C19/00 B02C9/00 B32B5/16 B82B1/00 B82Y30/00 C01B33/26 C04B103/40 C04B14/00 C04B14/04 C04B14/06 C04B14/10 C04B14/16 C04B14/18 C04B14/30 C04B14/36 C04B16/04 C04B16/08 C04B18/02 C04B18/04 C04B18/06 C04B18/08 C04B18/10 C04B18/14 C04B18/16 C04B2/02 C04B20/00 C04B20/02 C04B20/10 C04B22/00 C04B24/24 C04B24/26 C04B26/06 C04B26/14 C04B26/16 C04B26/18 C04B28/00 C04B28/02 C04B28/04 C04B28/06 C04B28/08 C04B28/10 C04B28/12 C04B28/14 C04B28/18 C04B28/22 C04B28/24 C04B28/32 C04B30/00 C04B38/00 C04B38/10 C04B40/00 C04B7/00 C04B7/02 C04B7/12 C04B7/14 C04B7/24 C04B7/26 C04B7/32 C04B7/34 C04B7/35 C04B7/36 C04B7/52 C04B9/00 C08J9/00 C08K3/00 C09C3/06 C09K3/12 C09K8/00 C09K8/02 C09K8/03 C09K8/04 C09K8/05 C09K8/12 C09K8/14 C09K8/16 C09K8/40 C09K8/42 C09K8/46 C09K8/47 C09K8/473 C09K8/48 C09K8/487 C09K8/493 C09K8/50 C09K8/502 C09K8/504 C09K8/508 C09K8/512 C09K8/516 C09K8/518 C09K8/556 C09K8/58 C09K8/60 C09K8/62 C09K8/66 C09K8/68 C09K8/70 C09K8/74 C09K8/80 C09K8/84 C09K8/88 C4B20/00 C4B28/00 C9K8/46 C9K8/48 C9K8/487 C9K8/502 C9K8/504 C9K8/516 E02D31/00 E21B21/00 E21B23/00 E21B33/00 E21B33/128 E21B33/13 E21B33/138 E21B33/14 E21B33/16 E21B41/00 E21B43/00 E21B43/04 E21B43/16 E21B43/22 E21B43/26 E21B43/267 E21B47/00 E21B47/04 E21B49/00 E21B49/08 E21B7/06 E21B7/20 (Advanced/Invention); B82Y30/00 B82Y99/00 C04B103/40 C04B111/00 C04B111/10 C04B28/02 C04B28/04 C04B7/13 C04B7/24 C04B7/28 C09K8/05 C09K8/40 C09K8/46 C09K8/467 C09K8/473 C09K8/80 E21B33/138 E21B33/14 E21B43/00 (Advanced/Non-invention); B82Y30/00 C01B33/00 C04B14/00 C04B14/02 C04B14/16 C04B14/30 C04B16/00 C04B18/04 C04B18/16 C04B20/00 C04B22/00 C04B24/00 C04B28/00 C04B28/02 C04B7/00 C04B9/00 C08J9/00 C09K8/00 C09K8/40 C09K8/42 C09K8/46 C09K8/473 C09K8/50 C09K8/60 E21B33/13 E21B33/138 E21B43/00 E21B43/02 E21B43/25 E21B7/04 (Core/Invention); C04B7/00 C09K8/42 C09K8/60 E21B43/00 (Core/Non-invention)

International (IPC 1-7): C04B14/36 C04B18/16 C04B20/02 C09K7/02 C09K7/04 C09K8/42 E21B33/13 E21B43/26 E21B43/267

CPC: C04B26/04 C04B26/10 C04B26/105 C04B26/12 C04B26/122 C04B26/127 C04B26/24 C04B7/02 Y10S507/904 Y10S507/924 C09K8/03 C09K2208/04 C04B18/101 C04B30/00 E21B43/267 B82Y99/00 E21B47/09 C04B2111/00043 C09K3/1006 C04B28/10 C04B2111/00198 E21B47/0005 C04B14/06 C04B14/10 C04B18/146 C04B24/38 C04B2103/408 C04B2103/46 C04B2103/50 C04B2103/61 C04B28/00 C04B24/161 C04B24/2611 C04B24/2652 C04B24/2676 C04B14/047 C04B14/106 C04B14/108 C04B18/141 C04B24/26 Y10T428/2982 C04B14/303 C04B2111/00215 C04B14/16 C04B20/002 C04B20/0048 C04B22/064 C04B38/02 C04B2103/0049 C04B2103/12 C04B14/14 C04B22/0026 C04B28/32 C04B40/0092 E21B7/20 C09K8/805 C09K8/685 C04B2111/10 C09K8/424 G01V11/002 G01V15/00 E21B21/002 C04B14/042 C04B14/24 C04B14/386 C04B14/42 C04B18/24 C04B18/023 C04B20/1029 C09K8/601 E21B33/13 E21B49/08 C04B18/021 Y02W30/97 C09K8/60 E21B47/00 E21B33/16 C04B7/24 C09K8/665 C04B18/16 C09K8/68 C09K8/703 C09K2208/30 E21B43/04 C04B38/10 C04B2103/40 C04B2103/22 C04B2111/00017 C04B28/184 C04B14/104 C09K8/145 C09K8/493 C09K8/16 C04B2103/0035 C04B12/04 C04B14/18 C04B14/368 C04B18/22 C04B24/383 C04B2103/44 C09K8/04 C04B18/162 E21B41/0092 C04B14/043 C04B20/008 C09K8/032 C09K8/502 C09K8/5045 C09K8/516 C09K8/50 C09K8/512 C09K8/518 Y02P40/143 Y02P40/145 C04B14/08 C04B18/08 C04B20/0024 C04B24/36 C04B24/42 C04B14/30 C04B14/308 C09K8/40 C04B7/28 C09K8/528 C09K2208/08 C09K2208/32 C04B7/00 C09K8/42 C04B26/06 C04B26/14 C04B26/16 C04B26/18 C04B20/026 C04B28/04 C04B28/06 C04B28/14 C04B28/18 C09K8/48 C09K8/487 C04B18/0481 C04B40/0046 C04B2103/0085 C04B2103/24 C04B2103/42 C04B20/0036 B82Y30/00 C04B14/062 C04B2111/00008 C09K8/428 C09K8/62 E21B33/14 Y10S507/906 Y10S977/963 C04B7/527 C04B20/10 C04B20/1011 C04B28/02 C04B28/08 C04B2111/00146 C09K8/70 C09K8/80 C09K2208/10 C09K8/02 C04B14/4668 C04B18/082 C04B22/08 C04B2103/20 C04B2111/00086 E21B33/138 C04B18/067 C09K8/46 C09K8/426 C04B26/02 C04B28/021 C04B2111/1037 C09K8/44 C09K8/467 C09K8/473 Y02W30/92 Y02W30/94 Y02W30/95 Y02W30/96

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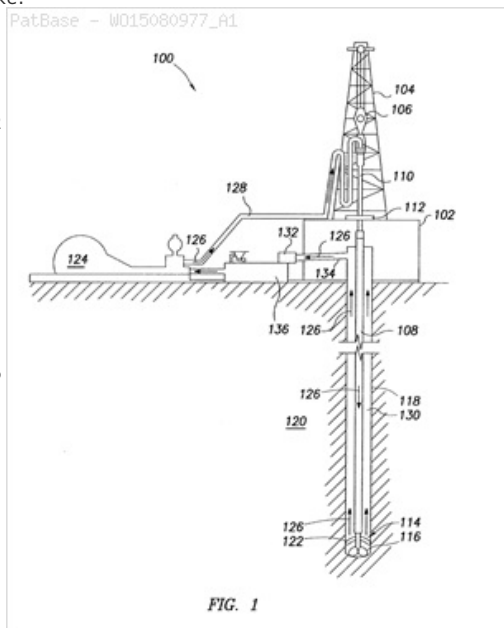


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
AR047795 AA	20060222	AR2005P100367	20050201

AR060058 AA	20080521	AR2007P101175	20070322
AR087113 AA	20140212	AR2012P102492	20120710
AR090782 AA	20141203	AR2013P101327	20130422
AR091136 AA	20150114	AR2013P101793	20130523
AR091531 AA	20150211	AR2013P102209	20130624
AR092255 AA	20150408	AR2013P103042	20130827
AR093112 AA	20150520	AR2013P103851	20131023
AR094176 AA	20150715	AR2013P104904	20131219
AR094688 AA	20150819	AR2014P100501	20140217
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BR112012016471 A2	20160412	BR20121116471	20110104
BR112012032080 A2	20161108	BR20121132080	20110621

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Priority:

AU20090321421	20091102	AU20130206072	20130529	AU20130251467	20130426
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US20150928555	20151030	WO2013US42311	20130222	WO2014US66908	20141121
US20160339277	20161031				

Probable Assignee: HALLIBURTON ENERGY SERVICES INC

Assignee(s): (std): BRENNIS D CHAD ; BRENNIS DARRELL CHAD ; CHATTERJI JITEN ; BRENNIS D CHAD ; CROMWELL ROGER S ; CHALTERJI JILEN ; CHATTERJI KITEN ; CROMWELL ROGER ; COVINGTON RICKY L ; CHATTERJI JITEM ; CAVENY WILLIAM J ; COTTRILL EMILY ELIZABETH HELEN ; CONVINGTON RICKY ; COVINGTON RICKY ; HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON ENERGY SERV INC ; CURTIS PHILIP ANTHONY ; DESHPANDE ABHIMANYU ; GORDON CHRISTOPHER L ; HUDGINS CALLIE RENEE ; HUDGINS CALLIE R ; DEPLACIDO PRESTON ; HALIBURTON ENERGY SERVICES INC ; JARRATT CALLIE R ; GARRISON CHRISTOPHER JAY ; HALLIBURTON ENERGY SERVICES INC ; JONES PAUL J ; PATIL RAHUL CHANDRAKANT ; TARAFDAR ABHIJIT ; KHEHLIBERTON ENERDZHI SERVISIZ INK ; REDDY BAIRREDDY RAGHAVA ; KARCHER JEFFREY D ; MORGAN RICKEY L ; KARCHER JEFFREY ; KARCHER JEFFERY ; REDDY B RAGHAVA ; KARCHER JEFFERY D ; SPENCER JOSEPH V ; KRANZ ZACHARY ROBERT ; LUO HONGYU ; POWELL RONALD J ; SAINI RAJESH K ; SANTRA ASHOK K ; NORMAN LEWIS R ; PINDIPROLU SAIRAM KS ; PATIL SANDIP PRABHAKAR ; RODDY CRAIG ; RAVI KRISHNA ; THAEMLITZ CARL J ; PINDIPROLU SAIRAM K S ; HALLIBURTON ENERGY DEVICES INC ; RODDY CRAIG W ; WAIN CHRISTOPHER PAUL ; KING BOBBY J ; MORGAN RONNIE G ; KING BOBBY JOE ; TURNER CRAIG ROBERT ; RODDY CRAIG WAYNE ; BENKLEY JAMES R ; BENKLEY JAMES ROBERT ; BRENNIS CHAD ; BRENNIS CHAD D ; HALLIBURTON ENERGY SERVICES INC ; KHEHLIBERTON ENERDZHI SERVISIZ INK ; KHEHLIBERTON ENERDZHI SERVISIZ INK

Assignee(s): HALLIBURTON ENERGY SERVICES INC HOUSTON ; HALLIBURTON ENERGY SERVICES INC DUNCAN ; BRENNIS D ; KENT ROBERT A ; KARCHER JEFFERY DWANE ; MORGAN RONNIE GLEN ; KEYS CRYSTAL L ; MENEZES CLIVE DENIS ; HALLIBURTON ENERGY SERVICES INC 10200 BELLAIRE BOULEVARDHOUSTONTX77072US ; HALLIBURTON ENERGY SERVICES INC P.O. BOX 1431DUNCANOK73536-0440US ; HALLIBURTON ENERGY SERVICES INC 10200 BELLAIRE BLVD.HOUSTONTX77072US ; HALLIBURTON ENERGY SERVICES INC P.O. BOX 1431DUNCANOK73536US ; JONES PAUL JOSEPH ; CROMWELL ROGER STANLEY ; HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON ENERGY SERVICES INC ; ADAMS BAYA

Inventor(s): (std): ABHIJIT TARAFDAR ; ABHIMANYU DESHPANDE ; ADAMS BAYA ; BENKLEY JAMES ; BENKLEY JAMES R ; BENKLEY JAMES ROBERT ; BRENNIS CHEHD D ; BRENNIS DARRELL CHEHD ; BRENNIS CHAD ; BRENNIS CHAD D ; BRENNIS D C ; BRENNIS D CHAD ; BRENNIS DARRELL CHAD ; CAVENY WILLIAM J ; CHALTERJI JILEN ; CHANDRAKANT PATIL RAHUL ; CHATTERDZHI DZHITEN ; CHATTERJI JITEM ; CHATTERJI JITEN ; CHAD BRENNIS DARRELL ; CONVINGTON RICKY ; COVINGTON RICKY L ; CRAIG W RODDY ; CROMWELL ROGER ; CROMWELL ROGER S ; CROMWELL ROGER STANLEY ; DEPLACIDO PRESTON ; DESHPANDE ABHIMANYU ; GARRISON CHRISTOPHER JAY ; JITEN CHATTERJI ; JONES PAUL J ; JONES PAUL JOSEPH ; KARCHER JEFFERY ; KARCHER JEFFERY D ; KARCHER JEFFERY DWANE ; KARCHER JEFFREY ; KEYS CRYSTAL L ; KING BOBBI DZH ; GORDON CHRISTOPHER L ; HUDGINS CALLIE R ; JARRATT CALLIE R ; KING BOBBY J ; KRANZ ZACHARY ROBERT ; LUO HONGYU ; MENEZES CLIVE DENIS ; MORGAN RICKEY L ; MORGAN RONNIE G ; MORGAN RONNIE GLEN ; MORGAN RONNIE GLEN ; KING BOBBY JOE ; KRANZ ZACHARY ROBERT ; NORMAN LEWIS R ; PATIL RAHUL CHANDRAKANT ; PATIL SANDIP PRABHAKAR ; PAUL J JONES ; PINDIPROLU SAIRAM KS ; POWELL RONALD J ; RAVI KRISHNA ; REDDY B RAGHAVA ; REDDY BAIRREDDY RAGHAVA ; RODDY KREHJG UEHJN ; RODDY CRAIG ; RODDY CRAIG W ; ROBERT TURNER CRAIG ; RODDY KREHJG U ; RODDY CRAIG WAYNE ; RONNIE G MORGAN ; SAINI RAJESH K ; SANTRA ASHOK K ; SPENCER JOSEPH ; SPENCER JOSEPH V ; ROGER CROMWELL ; TARAFDAR ABHIJIT ; THAEMLITZ CARL J ; WAYNE RODDY CRAIG ; RONNIE GLEN MORGAN ; RODDY KREHJG UEHJN ; PINDIPROLU SAIRAM K S ; MORGAN RIKI L ; KIZ KRISTAL L ; KING BOBBI DZHO ; KARCHER JEFFREY D ; KARCHER DZHEFFRI D ; JEFFREY D KARCHER ; JAMES R BENKLEY ; DZHARRATT KALLI R ; DESPLACIDO PRESTON ; CRAIG WAYNE RODDY ; COVINGTON RICKY ; CHATTERJI JITEN ; CHATTERJI KITEN ; CHATTERJI JILEN ; CHATTERDZHI DZHITEN ; CHAD BRENNIS D ; BRENNIS DARRELL CHEHD ; BRENNIS DARRELL CHED ; BRENNIS DARRELL CHAD ; BRENNIS D CHAD ; BRENNIS D CHAD ; BRENNIS CHED D ; DARRELL CHAD BRENNIS ; D CHAD BRENNIS ; ANTHONY CURTIS PHILIP ; CLIVE D MENEZES ; RODDY CRAIGWAYNE ; GORDON CHRISTOPHER LYNN ; RODDY KREHJG U ; HUDGINS CALLIE RENEE ; BRENNIS D CHED ; BENKLEY DZHEHMS R

Inventor(s): KITEN CHATTERJI ; HUDGINS CALLIE ; CRYSTAL L KEYS ; MORGAN RONNIE ; CARL J THAEMLITZ ; RICKY L COVINGTON ; KING BOBBY JOE DUNCAN ; THAEMLITZ CARL JUS ; CURTIS PHILIP ANTHONY ;

BOBBY JOE KING ; BENKLEY JAMES RUS ; BAYA ADAMS ; BRENNEIS D CHADUS ; BRENNEIS D ; CAVENY WILLIAM JUS ; CALLIE RENEE HUDGINS ; CALLIE R JARRATT ; CALLIE R HUDGINS ; CLIVE DENIS MENEZES ; CHRISTOPHER JAY GARRISON ; DEPLACIDO PRESTONUS ; DCHAD BRENNEIS ; JEFFERY DWANE KARCHER ; JEFFERY D KARCHER ; JARRATT CALLIE RUS ; JAMES ROBERT BENKLEY ; JOSEPH V SPENCER ; MORGAN RICKEY LUS ; PAUL JOSEPH JONES ; RICKEY L MORGAN ; PRESTON DESPLACIDO ; PRESTON DEPLACIDO ; RODDY CRAIG WUS ; ZACHARY ROBERT KRANZ ; WILLIAM J CAVENY ; TURNER CRAIG ROBERT ; ROGER S CROMWELL ; ROGER STANLEY CROMWELL ; SPENCER JOSEPH V PAMPA ; SPENCER JOSEPH VUS ; RODDY CRAIG WAYNE DUNCAN ; RODDY CRAIG WAYNEUS ; RODDY CRAIG W DUNCAN ; REDDY BAIRREDDY RAGHAVA DUNCAN ; RAHUL CHANDRAKANT PATIL ; KRANZ ZACHARY ROBERT PAMPA ; KRANZ ZACHARY ROBERTUS ; MORGAN RONNIE GUS ; KING BOBBY J DUNCAN ; JEFFREY KARCHER ; JITEM CHATTERJI ; HUDGINS CALLIE RENEEUS ; GORDON CHRISTOPHER L OKLAHOMA CITY ; KING BOBBY ; GARRISON CHRISTOPHER JAY PANHANDLE ; GARRISON CHRISTOPHER JAYUS ; CROMWELL ROGER S WALTERS ; COVINGTON RICKY LUS ; CHAD D BRENNEIS ; CHATTERJI JITEN DUNCAN ; CHATTERJI JITENUS ; CHRISTOPHER L GORDON ; CHATTERJI JITEM DUNCAN ; CHAD BRENNEIS ; BRENNEIS DARRELL CHAD MARLOW ; BRENNEIS DARRELL CHADUS ; BRENNEIS D CHAD MARLOW ; BRENNEIS DARRELL ; BENKLEY JAMES ROBERT DUNCAN ; BENKLEY JAMES ROBERTUS ; BAIRREDDY RAGHAVA REDDY

Agent(s):

CALLINANS; FISHER ADAMS KELLY CALLINANS; SHELSTON IP PTY LTD; FB RICE; PHILLIPS ORMONDE FITZPATRICK; FB RICE PATENT AND TRADE MARK ATTORNEYS; OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE OR SENCRL SRL LLP; NORTON ROSE CANADA SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; SIM AND MCBURNEY; WEISSE RENATE DIPL PHYS DR ING; CURTIS PHILIP ANTHONY; COTTRILL EMILY ELIZABETH HELEN; TURNER CRAIG ROBERT; ONO SHUSUKE; KING LAWRENCE; BURNETT CHRISTOPHER JAMES; SULEIMAN I AL AMMAR LAW OFFICE; ARIFIA JAUHARIA FAJRA ST SH; CRAIG W RODDY HALLIBURTON ENERGY SERVICES; ROBERT A KENT; CRAIG W; BAKER BOTTS LLP; RODDY CRAIG W; TUMEY LLP; ROBERT A; TUMEY L L P; CURTIS PHILIP ANTHONY ET AL; TURNER CRAIG ROBERT ET AL; COTTRILL EMILY ELIZABETH HELEN ET AL; TUMEY COREY S; COREY S TUMEY

Designated states:

AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR047795 AA	20060222	LSPB	+	published / reissued	
AR047795 AA	20100726	LSGT	+FG	GRANT, REGISTRATION	
AR060058 AA	20080521	LSPB	+	published / reissued	
AR060058 AA	20100519	LSWD	-FB	SUSPENSION OF GRANTING PROCEDURE	
AR087113 AA	20140212	LSPB	+	published / reissued	
AR090782 AA	20141203	LSPB	+	published / reissued	
AR091136 AA	20150114	LSPB	+	published / reissued	
AR091531 AA	20150211	LSPB	+	published / reissued	
AR092255 AA	20150408	LSPB	+	published / reissued	
AR093112 AA	20150520	LSPB	+	published / reissued	
AR094176 AA	20150715	LSPB	+	published / reissued	
AR094688 AA	20150819	LSPB	+	published / reissued	
AU2007231193 AA	20071004	LSPB	+	published / reissued	
AU2007231193 AA	20110210	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
AU2009216602 AA	20090827	LSPB	+	published / reissued	
AU2009216602 AA	20140116	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2009216602 BB	20130905	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2009290758 AA	20100318	LSPB	+	published / reissued	

AU2009290758 AA	20141120	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2009290758 AA	20170316	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED
AU2009290758 BB	20140724	LSGT	+	granted / extensions (spc, cpc, pte)
AU2009321421 AA	20100603	LSPB	+	published / reissued
AU2009321421 AA	20131107	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
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AU2009321423 BB	20140306	LSGT	+	granted / extensions (spc, cpc, pte)
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AU2010233555 BB	20130718	LSGT	+	granted / extensions (spc, cpc, pte)
AU2010240744 AA	20101028	LSPB	+	published / reissued
AU2010240744 AA	20140612	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED
AU2010252793 AA	20101202	LSPB	+	published / reissued
AU2010252793 AA	20131121	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2010252793 AA	20161222	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED
AU2010252793 BB	20130725	LSGT	+	granted / extensions (spc, cpc, pte)
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AU2010299648 AA	20140116	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2010299648 BB	20130919	LSGT	+	granted / extensions (spc, cpc, pte)

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AU2010299649 BB	20140320	LSGT	+	granted / extensions (spc, cpc, pte)	
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AU2010311158 BB	20130912	LSGT	+	granted / extensions (spc, cpc, pte)	
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AU2010311178 AA	20140313	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2010311178 BB	20131114	LSGT	+	granted / extensions (spc, cpc, pte)	
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AU2011203389 AA	20150129	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
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AU2011268758 AA	20140724	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2011268758 BB	20140327	LSGT	+	granted / extensions (spc, cpc, pte)	
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AU2011273259 AA	20140417	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2011273259 BB	20131219	LSGT	+	granted / extensions (spc, cpc, pte)	
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AU2011309957 AA	20170420	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2011309957 BB	20140717	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2011346883 AA	20120628	LSPB	+	published / reissued	
AU2011346883 AA	20131219	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS: AMEND THE NAME OF THE INVENTOR TO READ BRENNEIS,

AU2011346883 AA	20150122	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2011346883 BB	20140911	LSGT	+	granted / extensions (spc, cpc, pte)
AU2012282775 AA	20130117	LSPB	+	published / reissued
AU2012282775 AA	20150205	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2012282775 AA	20170202	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED
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AU2013206072 AA	20130620	LSPB	+	published / reissued
AU2013206072 AA	20151029	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2013206072 BB	20150702	LSGT	+	granted / extensions (spc, cpc, pte)
AU2013221468 AA	20130822	LSPB	+	published / reissued
AU2013221468 AA	20151210	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2013221468 BB	20150813	LSGT	+	granted / extensions (spc, cpc, pte)
AU2013251467 AA	20131031	LSPB	+	published / reissued
AU2013251467 AA	20151224	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED
AU2013266319 AA	20131128	LSPB	+	published / reissued
AU2013266319 AA	20151119	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2013266319 BB	20150723	LSGT	+	granted / extensions (spc, cpc, pte)
AU2013280260 AA	20140103	LSPB	+	published / reissued
AU2013280260 AA	20151224	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2013280260 BB	20150827	LSGT	+	granted / extensions (spc, cpc, pte)
AU2013308769 AA	20140306	LSPB	+	published / reissued
AU2013308769 AA	20161103	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2013308769 BB	20160707	LSGT	+	granted / extensions (spc, cpc, pte)

AU2013309038 AA	20140306	LSPB	+	published / reissued
AU2013309038 AA	20160728	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2013309038 BB	20160331	LSGT	+	granted / extensions (spc, cpc, pte)
AU2013334222 AA	20140501	LSPB	+	published / reissued
AU2013334222 AA	20161117	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2013334222 BB	20160721	LSGT	+	granted / extensions (spc, cpc, pte)
AU2013361111 AA	20140626	LSPB	+	published / reissued
AU2013361111 AA	20160204	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2013361111 BB	20151008	LSGT	+	granted / extensions (spc, cpc, pte)
AU2014224072 AA	20150326	LSPB	+	published / reissued
AU2014224072 AA	20160211	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED
AU2014256987 AA	20141030	LSPB	+	published / reissued
AU2014256987 AA	20170323	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2014256987 BB	20161124	LSGT	+	granted / extensions (spc, cpc, pte)
AU2014296231 AA	20150205	LSPB	+	published / reissued
AU2014296231 BB	20170420	LSGT	+	granted / extensions (spc, cpc, pte)
AU2014354985 AA	20150604	LSPB	+	published / reissued
AU2014354985 BB	20170216	LSGT	+	granted / extensions (spc, cpc, pte)
AU2015215837 AA	20150910	LSPB	+	published / reissued
AU2015215837 AA	20170216	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)
AU2015215837 BB	20161020	LSGT	+	granted / extensions (spc, cpc, pte)
AU2015261738 AA	20151224	LSPB	+	published / reissued
AU2015261738 AA	20170119	LSLE	-MK25	APPLICATION LAPSED REG. 22.2I(2) - FAILURE TO PAY ACCEPTANCE FEE
AU2015261738 BB	20160915	LSGT	+	granted / extensions (spc, cpc, pte)
BR102014022538 A2	20151208	LSPB	+	published / reissued
BR112012006871 A2	20160607	LSPB	+	published / reissued

BR112012010269 A2	20160329	LSPB	+	published / reissued	
BR112012016471 A2	20160412	LSPB	+	published / reissued	
BR112012016471 A2	20161101	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	TEXT : REFERENTE A 6A ANUIDADE.
BR112012016471 A2	20170221	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)	
BR112012032080 A2	20161108	LSPB	+	published / reissued	
BR112012032080 A2	20170418	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
BR112012033091 A2	20161122	LSPB	+	published / reissued	
BR112012033091 A2	20170418	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
BR112013004245 A2	20160726	LSPB	+	published / reissued	
BR112013014863 A2	20161018	LSPB	+	published / reissued	
BR112013016242 A2	20160927	LSPB	+	published / reissued	
BRPI0811119 A2	20141223	LSPB	+	published / reissued	
BRPI0811119 A2	20170307	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
BRPI0918170 A2	20151201	LSPB	+	published / reissued	
BRPI0921684 A2	20160216	LSPB	+	published / reissued	
BRPI1011833 A2	20160315	LSPB	+	published / reissued	
BRPI1011833 A2	20170328	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
BRPI1013317 A2	20160329	LSPB	+	published / reissued	
BRPI1013317 A2	20170117	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	TEXT : REFERENTE A 7A ANUIDADE.
BRPI1014963 A2	20160426	LSPB	+	published / reissued	
BRPI1014963 A2	20170207	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
CA2621835 AA	20080304	LSPB	+	published / reissued	
CA2621835 AA	20080304	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2621835 AA	20080304	LSSES	+EEER	EXAMINATION REQUEST	
CA2621835 C	20110628	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2642930 AA	20080820	LSPB	+	published / reissued	
CA2642930 AA	20080820	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2642930 AA	20080820	LSSES	+EEER	EXAMINATION	

REQUEST					
CA2642930 AA	20110321	LSLE	-FZDE	DEAD	
CA2642930 AA	20110516	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20110321
CA2681606 AA	20081120	LSPB	+	published / reissued	
CA2681606 AA	20090922	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2681606 AA	20090922	LSES	+EEER	EXAMINATION REQUEST	
CA2681606 C	20121106	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2714452 AA	20090827	LSPB	+	published / reissued	
CA2714452 AA	20100805	LSES	+EEER	EXAMINATION REQUEST	
CA2714452 AA	20101005	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20100805
CA2714452 C	20120731	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2736148 AA	20100318	LSPB	+	published / reissued	
CA2736148 AA	20110304	LSES	+EEER	EXAMINATION REQUEST	
CA2736148 AA	20110504	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20110304
CA2736148 C	20140401	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2741491 AA	20100603	LSPB	+	published / reissued	
CA2741491 AA	20110421	LSES	+EEER	EXAMINATION REQUEST	
CA2741491 AA	20110614	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20110421
CA2741491 C	20151229	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2741824 AA	20100603	LSPB	+	published / reissued	
CA2741824 AA	20110427	LSES	+EEER	EXAMINATION REQUEST	
CA2741824 AA	20110618	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20110427
CA2741824 C	20140429	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2755433 AA	20100603	LSPB	+	published / reissued	
CA2755433 AA	20110914	LSES	+EEER	EXAMINATION REQUEST	
CA2755433 AA	20170411	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20170228
CA2757109 AA	20101014	LSPB	+	published / reissued	
CA2757109 AA	20110929	LSES	+EEER	EXAMINATION REQUEST	
CA2757109 AA	20111118	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20110929
CA2757109 C	20160216	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2758311 AA	20101028	LSPB	+	published / reissued	
CA2758311 AA	20111011	LSES	+EEER	EXAMINATION REQUEST	
CA2758311 AA	20170501	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20170320
CA2758311 C	20131224	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2762605 AA	20101202	LSPB	+	published /	

CA2762605 AA	20111118	LSES	+EEER	reissued EXAMINATION REQUEST	
CA2762605 AA	20170313	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20170130
CA2774302 AA	20110331	LSPB	+	published / reissued	
CA2774302 AA	20120315	LSES	+EEER	EXAMINATION REQUEST	
CA2774302 AA	20120507	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20120315
CA2774302 C	20150505	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2774306 AA	20120315	LSPB	+	published / reissued	
CA2774306 AA	20120315	LSES	+EEER	EXAMINATION REQUEST	
CA2774306 AA	20120507	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20120315
CA2774306 AA	20161107	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20160926
CA2774306 C	20140715	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2778241 AA	20110505	LSPB	+	published / reissued	
CA2778241 AA	20120419	LSES	+EEER	EXAMINATION REQUEST	
CA2778241 AA	20120619	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20120419
CA2778241 C	20150714	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2778242 AA	20110505	LSPB	+	published / reissued	
CA2778242 AA	20120419	LSES	+EEER	EXAMINATION REQUEST	
CA2778242 AA	20120619	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20120419
CA2778242 C	20140923	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2802959 AA	20121214	LSPB	+	published / reissued	
CA2802959 AA	20130216	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20121214
CA2802959 C	20150407	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2803223 AA	20121219	LSPB	+	published / reissued	
CA2803223 AA	20130220	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20121219
CA2803223 C	20150728	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2808133 AA	20130212	LSPB	+	published / reissued	
CA2808133 AA	20130317	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20130212
CA2808133 C	20151103	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2821573 AA	20130613	LSPB	+	published / reissued	
CA2821573 AA	20130730	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20130613
CA2821931 AA	20130614	LSPB	+	published / reissued	
CA2821931 AA	20130810	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20130614
CA2821931 C	20160216	LSGT	+	granted / extensions (spc, cpc, pte)	

CA2847401 AA	20110331	LSPB	+	published / reissued	
CA2847401 AA	20140507	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20140324
CA2847401 C	20140916	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2847489 AA	20110331	LSPB	+	published / reissued	
CA2847489 AA	20140507	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20140324
CA2847489 C	20140930	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2847647 AA	20110331	LSPB	+	published / reissued	
CA2847647 AA	20140513	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20140324
CA2847647 AA	20160616	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20160505
CA2861662 AA	20140625	LSPB	+	published / reissued	
CA2861662 AA	20140920	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20140625
CA2863283 AA	20150312	LSPB	+	published / reissued	
CA2863283 AA	20170424	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20170313
CA2863987 AA	20140806	LSPB	+	published / reissued	
CA2870367 AA	20141010	LSPB	+	published / reissued	
CA2870367 AA	20141128	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20141010
CA2873279 AA	20110331	LSPB	+	published / reissued	
CA2873279 C	20170321	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2873296 AA	20110331	LSPB	+	published / reissued	
CA2873296 C	20170516	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2875660 AA	20141203	LSPB	+	published / reissued	
CA2875660 AA	20150117	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20141203
CA2881910 AA	20150212	LSPB	+	published / reissued	
CA2881910 AA	20150219	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20150212
CA2882817 AA	20150223	LSPB	+	published / reissued	
CA2882817 AA	20150318	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20150223
CA2888162 AA	20150410	LSPB	+	published / reissued	
CA2891718 AA	20150514	LSPB	+	published / reissued	
CA2907755 AA	20150921	LSPB	+	published / reissued	
CA2907755 AA	20151016	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20150921
CA2914252 AA	20151201	LSPB	+	published / reissued	
CA2914252 AA	20151222	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20151201
CA2926226 AA	20160401	LSPB	+	published / reissued	
CA2926226 AA	20160419	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20160401
CA2940821 AA	20120628	LSPB	+	published /	

CA2940821 AA	20160920	LSES	+EEER	reissued EXAMINATION REQUEST	EFFECTIVE DATE : 20160831
CA2962979 AA	20110331	LSPB	+	published / reissued	
CA2962979 AA	20170412	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20170330
CN101305070 A	20081112	LSPB	+	published / reissued	
CN101305070 A	20081112	LSPB	+C06	PUBLICATION	
CN101305070 A	20150909	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CN103140562 A	20130605	LSPB	+	published / reissued	
CN103140562 A	20130605	LSPB	+C06	PUBLICATION	
CN103370393 A	20131023	LSPB	+	published / reissued	
CN103370393 A	20131023	LSPB	+C06	PUBLICATION	
CN103370393 A	20161123	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN103370393 B	20161123	LSGT	+	granted / extensions (spc, cpc, pte)	
CN103459348 A	20131218	LSPB	+	published / reissued	
CN103459348 A	20131218	LSPB	+C06	PUBLICATION	
CN104114513 A	20141022	LSPB	+	published / reissued	
CN104114513 A	20141022	LSPB	+C06	PUBLICATION	
CN104812868 A	20150729	LSPB	+	published / reissued	
CN104812868 A	20150729	LSPB	+C06	PUBLICATION	
CN104995279 A	20151021	LSPB	+	published / reissued	
CN104995279 A	20151021	LSPB	+C06	PUBLICATION	
EA201491980 A1	20150227	LSPB	+	published / reissued	
EP1928975 A1	20080611	LSPB	+	published / reissued	
EP1928975 A1	20080611	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080305
EP1928975 A1	20090506	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090402
EP1928975 A1	20150617	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150521
EP1928975 A1	20151104	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1928975 A1	20151217	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602006047171 COUNTRY OF REF DOCUMENT : DE
EP1928975 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP1928975 A1	20160805	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602006047171 COUNTRY OF REF DOCUMENT

: DE					
EP1928975 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151104
EP1928975 A1	20161012	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160805
EP1928975 A1	20170301	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 602006047171 COUNTRY OF REF DOCUMENT : DE
EP1928975 A1	20170426	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20160824
EP1928975 B1	20151104	LSGT	+	granted / extensions (spc, cpc, pte)	EFFECTIVE DATE : 20091125
EP2158288 A1	20100303	LSPB	+	published / reissued	
EP2158288 A1	20100303	LSES	+17P	REQUEST FOR EXAMINATION FILED	
EP2158288 A1	20101117	LSES	+17Q	FIRST EXAMINATION REPORT	
EP2158288 A1	20160406	LSDW	-18D	DEEMED TO BE WITHDRAWN	
EP2245106 A1	20101103	LSPB	+	published / reissued	EFFECTIVE DATE : 20100812
EP2245106 A1	20101103	LSES	+17P	REQUEST FOR EXAMINATION FILED	
EP2245106 A1	20131113	LSES	+17Q	FIRST EXAMINATION REPORT	
EP2245106 A1	20141105	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	
EP2245106 A1	20141217	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	
EP2245106 A1	20150506	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2245106 A1	20150515	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2245106 A1	20150603	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2245106 A1	20150615	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 725709 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150615
EP2245106 A1	20150618	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602009031071 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20150618
EP2245106 A1	20150624	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3

EP2245106 A1	20150915	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 725709 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150506
EP2245106 A1	20151026	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2245106 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150806
EP2245106 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150907
EP2245106 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150906
EP2245106 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150806
EP2245106 A1	20151130	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT

				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	: GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150807
EP2245106 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160125	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 8
EP2245106 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160209	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602009031071 COUNTRY OF REF DOCUMENT : DE
EP2245106 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON- PAYMENT OF DUE FEES

				NAT. OFFICE TO EPO	LAPSED DATE : 20150506
EP2245106 A1	20160413	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160209
EP2245106 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160302 YEAR OF FEE PAYMENT : 8
EP2245106 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160229
EP2245106 A1	20160531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20160205 YEAR OF FEE PAYMENT : 8
EP2245106 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160127 YEAR OF FEE PAYMENT : 8
EP2245106 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160125 YEAR OF FEE PAYMENT : 8
EP2245106 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150506
EP2245106 A1	20160930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160203
EP2245106 A1	20160930	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2245106 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160229
EP2245106 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED	COUNTRY OF REF DOCUMENT : CH NOTIFICATION OF LAPSE :

				VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	LAPSE BECAUSE OF NON- PAYMENT OF DUE FEES LAPSED DATE : 20160229
EP2245106 A1	20161130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2245106 A1	20170123	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 9
EP2245106 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON- PAYMENT OF DUE FEES LAPSED DATE : 20160203
EP2245106 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20161205 YEAR OF FEE PAYMENT : 9
EP2245106 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20170123 YEAR OF FEE PAYMENT : 9
EP2245106 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20170124 YEAR OF FEE PAYMENT : 9
EP2245106 B1	20150506	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2350226 A1	20110803	LSPB	+	published / reissued	
EP2350226 A1	20110803	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20110329
EP2350226 A1	20140226	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20140122
EP2350226 A1	20160510	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R003
EP2350226 A1	20161102	LSRV	-18R	REFUSED	EFFECTIVE DATE : 20160510
EP2362887 A2	20110907	LSPB	+	published / reissued	
EP2362887 A2	20110907	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20110602
EP2362887 A2	20131030	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130927
EP2362888 A1	20110907	LSPB	+	published / reissued	
EP2362888 A1	20110907	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20110602
EP2362888 A1	20130501	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130408
EP2362888 A1	20161214	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160708
EP2387603 A1	20111123	LSPB	+	published / reissued	
EP2387603 A1	20111123	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20110915
EP2387603 A1	20130320	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130220
EP2387603 A1	20161102	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160531
EP2417079 A1	20120215	LSPB	+	published / reissued	

EP2417079 A1	20120215	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20111102
EP2417079 A1	20160413	LSWD	-18W	WITHDRAWN	EFFECTIVE DATE : 20160307
EP2421929 A1	20120229	LSPB	+	published / reissued	
EP2421929 A1	20120229	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20111116
EP2421929 A1	20130710	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130610
EP2421929 A1	20170315	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20161001
EP2435528 A1	20120404	LSPB	+	published / reissued	
EP2435528 A1	20120404	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20111223
EP2435528 A1	20140416	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20140317
EP2435528 A1	20160106	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20150806
EP2465910 A1	20120620	LSPB	+	published / reissued	
EP2465910 A1	20130213	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20121220
EP2465910 A1	20130313	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130214
EP2480620 A1	20120801	LSPB	+	published / reissued	
EP2480620 A1	20120801	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120427
EP2480621 A1	20120801	LSPB	+	published / reissued	
EP2480621 A1	20120801	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120427
EP2493830 A1	20120905	LSPB	+	published / reissued	
EP2493830 A1	20120905	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120524
EP2493830 A1	20130529	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130424
EP2493830 A1	20161011	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R003
EP2493830 A1	20170308	LSRV	-18R	REFUSED	EFFECTIVE DATE : 20161011
EP2493999 A1	20120905	LSPB	+	published / reissued	
EP2493999 A1	20120905	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120530
EP2521700 A1	20121114	LSPB	+	published / reissued	
EP2521700 A1	20121114	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120802
EP2521700 A1	20130703	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130531
EP2521700 A1	20131120	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20131025
EP2521700 A1	20140416	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2521700 A1	20140430	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP

EP2521700 A1	20140515	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 662430 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20140515
EP2521700 A1	20140521	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2521700 A1	20140528	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602011006199 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20140528
EP2521700 A1	20140611	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : T3
EP2521700 A1	20140915	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 662430 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20140416
EP2521700 A1	20140925	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2521700 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2521700 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140716
EP2521700 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140816
EP2521700 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONNOFLAPSE :

				VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140717
EP2521700 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20141231	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140818
EP2521700 A1	20150119	LSRE	REG	REFERENCE TO A	REF COUNTRY CODE : DE

				NATIONAL CODE	REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602011006199 COUNTRY OF REF DOCUMENT : DE
EP2521700 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20150130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20141230 YEAR OF FEE PAYMENT : 5
EP2521700 A1	20150227	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20141226 YEAR OF FEE PAYMENT : 5
EP2521700 A1	20150325	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20150119
EP2521700 A1	20150331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20150331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20150115 YEAR OF FEE PAYMENT : 5
EP2521700 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID	COUNTRY OF REF DOCUMENT : DE

				TO NATIONAL OFFICE	PAYMENT DATE : 20150126 YEAR OF FEE PAYMENT : 5
EP2521700 A1	20150430	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602011006199 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20150119
EP2521700 A1	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20150828	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2521700 A1	20150831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150104
EP2521700 A1	20150930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON- PAYMENT OF DUE FEES LAPSED DATE : 20150131
EP2521700 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON- PAYMENT OF DUE FEES LAPSED DATE : 20150131
EP2521700 A1	20151104	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2521700 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON- PAYMENT OF DUE FEES LAPSED DATE : 20150104
EP2521700 A1	20160802	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 602011006199 COUNTRY OF REF DOCUMENT : DE
EP2521700 A1	20160928	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON- PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20160104
EP2521700 A1	20161028	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20160930
EP2521700 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON- PAYMENT OF DUE FEES LAPSED DATE : 20160104

EP2521700 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160802
EP2521700 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160201
EP2521700 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160201
EP2521700 A1	20161230	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20140416
EP2521700 B1	20140416	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2585551 A1	20130501	LSPB	+	published / reissued	
EP2585551 A1	20130501	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130122
EP2585552 A1	20130501	LSPB	+	published / reissued	
EP2585552 A1	20130501	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130122
EP2622040 A1	20130807	LSPB	+	published / reissued	
EP2622040 A1	20130807	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130322
EP2622040 A1	20151209	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20151109
EP2651849 A1	20131023	LSPB	+	published / reissued	
EP2651849 A1	20131023	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130619
EP2651849 A1	20140521	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BENKLEY, JAMES R.
EP2651849 A1	20140521	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : BRENNEIS, D. CHAD
EP2651849 A1	20140521	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : KARCHER, JEFFERY D
EP2651849 A1	20140521	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : RODDY, CRAIG W.
EP2655542 A1	20131030	LSPB	+	published / reissued	
EP2655542 A1	20131030	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130619
EP2743242 A2	20140618	LSPB	+	published / reissued	
EP2743242 A2	20140618	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140311
EP2743242 A2	20140903	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : RODDY, CRAIG WAYNE
EP2743242 A2	20140903	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : GORDON, CHRISTOPHER L.

EP2743242 A2	20140903	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : REDDY, BAIRREDDY RAGHAVA
EP2743242 A2	20140903	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : DESHPANDE, ABHIMANYU
EP2743242 A2	20140903	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : PATIL, RAHUL CHANDRAKANT
EP2743242 A2	20140903	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : CHATTERJI, JITEM
EP2743242 A2	20140903	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : CROMWELL, ROGER S.
EP2743242 A2	20170111	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20161128
EP2814787 A2	20141224	LSPB	+	published / reissued	
EP2814787 A2	20141224	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140730
EP2841523 A1	20150304	LSPB	+	published / reissued	
EP2841523 A1	20150304	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20141017
EP2841523 A1	20161228	LSWD	-18W	WITHDRAWN	EFFECTIVE DATE : 20161118
EP2848666 A1	20150318	LSPB	+	published / reissued	
EP2848666 A1	20150318	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140912
EP2848666 A1	20150805	LSWD	-18W	WITHDRAWN	EFFECTIVE DATE : 20150625
EP2855393 A1	20150408	LSPB	+	published / reissued	
EP2855393 A1	20150408	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20141118
EP2855393 A1	20150624	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BRENNEIS,D. CHAD
EP2855393 A1	20150624	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : RODDY, CRAIG W.
EP2855393 A1	20150624	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : CHATTERJI, JITEN
EP2855393 A1	20150624	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : JARRATT, CALLIE R.
EP2855393 A1	20160525	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160421
EP2855393 A1	20170208	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160902
EP2867326 A1	20150506	LSPB	+	published / reissued	
EP2867326 A1	20150506	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20141215
EP2867326 A1	20160309	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C09K 8/467 20060101ALI20160204BHEP
EP2867326 A1	20160309	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/02 20060101ALI20160204BHEP

EP2867326 A1	20160309	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C09K 8/40 20060101ALI20160204BHEP
EP2867326 A1	20160309	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C09K 8/42 20060101AFI20160204BHEP
EP2867326 A1	20160309	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 103/40 20060101ALI20160204BHEP
EP2867326 A1	20160615	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160523
EP2867326 A1	20161102	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2867326 A1	20161115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2867326 A1	20161115	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 841864 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20161115
EP2867326 A1	20161130	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP2867326 A1	20161215	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602013013506 COUNTRY OF REF DOCUMENT : DE
EP2867326 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20161102
EP2867326 A1	20170310	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2867326 A1	20170315	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK05 REF DOCUMENT NUMBER : 841864 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20161102
EP2867326 A1	20170320	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NO REF LEGAL EVENT CODE : T2 EFFECTIVE DATE : 20161102
EP2867326 A1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20161102
EP2867326 A1	20170428	LSLE	-PG25	LAPSED IN A	COUNTRY OF REF DOCUMENT

				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	: NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20161102
EP2867326 A1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20161102
EP2867326 A1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20170203
EP2867326 B1	20161102	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2888335 A1	20150701	LSPB	+	published / reissued	
EP2888335 A1	20150701	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150219
EP2888335 A1	20160406	LSES	+RA4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160304
EP2888335 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C09K 8/467 20060101AFI20160229BHEP
EP2888335 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : E21B 33/13 20060101ALI20160229BHEP
EP2888335 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/02 20060101ALI20160229BHEP
EP2888335 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/04 20060101ALI20160229BHEP
EP2888335 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 14/16 20060101ALI20160229BHEP
EP2888335 A1	20160406	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 40/00 20060101ALI20160229BHEP
EP2888335 A1	20170329	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20161005
EP2890756 A1	20150708	LSPB	+	published / reissued	
EP2890756 A1	20150708	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150220
EP2890756 A1	20160413	LSES	+RA4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160311
EP2890756 A1	20160413	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 26/18 20060101ALI20160307BHEP
EP2890756 A1	20160413	LSRE	RIC1	CLASSIFICATION	IPC : C08K 3/00

				(CORRECTION)	20060101ALI20160307BHEP
EP2890756 A1	20160413	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 26/14 20060101ALI20160307BHEP
EP2890756 A1	20160413	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 26/06 20060101ALI20160307BHEP
EP2890756 A1	20160413	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 26/16 20060101ALI20160307BHEP
EP2890756 A1	20160413	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C09K 3/12 20060101AFI20160307BHEP
EP2907862 A1	20150819	LSPB	+	published / reissued	
EP2907862 A1	20160330	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20160219
EP2912137 A1	20150902	LSPB	+	published / reissued	
EP2912137 A1	20150902	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150424
EP2912137 A1	20160420	LSES	+RA4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160321
EP2912137 A1	20160420	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/14 20060101ALI20160315BHEP
EP2912137 A1	20160420	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/02 20060101ALI20160315BHEP
EP2912137 A1	20160420	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C09K 8/46 20060101AFI20160315BHEP
EP2912137 A1	20160420	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : E21B 33/13 20060101ALI20160315BHEP
EP2912137 A1	20160420	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 7/24 20060101ALI20160315BHEP
EP2912137 A1	20160420	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/10 20060101ALI20160315BHEP
EP2912137 A1	20170419	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20161018
EP2935506 A1	20151028	LSPB	+	published / reissued	
EP2935506 A1	20151028	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150612
EP2935506 A1	20161026	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20160926
EP2935506 A1	20161026	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 38/10 20060101ALI20160920BHEP
EP2935506 A1	20161026	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C09K 8/40 20060101AFI20160920BHEP
EP2989290 A1	20160302	LSPB	+	published / reissued	
EP2989290 A1	20160302	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150930
EP2989290 A1	20161214	LSES	+A4	DESPATCH OF	EFFECTIVE DATE : 20161110

SUPPLEMENTARY SEARCH REPORT					
EP2989290 A1	20161214	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : E21B 33/16 20060101ALI20161104BHEP
EP2989290 A1	20161214	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : E21B 47/00 20120101AFI20161104BHEP
EP2989290 A1	20161214	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C09K 8/40 20060101ALI20161104BHEP
EP3002323 A1	20160406	LSPB	+	published / reissued	
EP3002323 A1	20170426	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20161007
EP3118278 A1	20170118	LSPB	+	published / reissued	
EP3118278 A1	20170222	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : GARRISON, CHRISTOPHER JAY
EP3118278 A1	20170222	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SPENCER, JOSEPH
EP3118278 A1	20170222	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : KRANZ, ZACHERY ROBERT
EP3118278 A1	20170222	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BRENNEIS, D. CHAD
EP3118278 A1	20170222	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : RODDY, CRAIG
EP3118278 A1	20170222	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BENKLEY, JAMES
EP3121245 A1	20170125	LSPB	+	published / reissued	
EP3121245 A1	20170308	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : RODDY, CRAIG
EP3121245 A1	20170308	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : SPENCER, JOSEPH
EP3121245 A1	20170308	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BRENNEIS, D. CHAD
EP3121245 A1	20170308	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : BENKLEY, JAMES
EP3121245 A1	20170308	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : GARRISON, CHRISTOPHER JAY
EP3121245 A1	20170308	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : KRANZ, ZACHERY ROBERT
GB2451007 A1	20090114	LSPB	+	published / reissued	
GB2451007 A1	20111123	LSWD	-WAP	APPLICATION WITHDRAWN, TAKEN TO BE WITHDRAWN OR REFUSED ** AFTER PUBLICATION UNDER SECTION 16(1)	
GB2529960 A1	20160309	LSPB	+	published / reissued	
GB2537236 A1	20161012	LSPB	+	published / reissued	

GC3615 A	20150629	LSGT	+	granted / extensions (spc, cpc, pte)
ID201701042 A	20170217	LSPB	+	published / reissued
IN01178DN2015 A	20150626	LSPB	+	published / reissued
IN01221DN2015 A	20150626	LSPB	+	published / reissued
IN01974DN2008 A	20090320	LSPB	+	published / reissued
IN02848DN2013 A	20160401	LSPB	+	published / reissued
IN03048KN2010 A	20111125	LSPB	+	published / reissued
IN03329DN2015 A	20151023	LSPB	+	published / reissued
IN03740DN2012 A	20151106	LSPB	+	published / reissued
IN03950DN2012 A	20151030	LSPB	+	published / reissued
IN04157DN2015 A	20151016	LSPB	+	published / reissued
IN04828DN2014 A	20150320	LSPB	+	published / reissued
IN05347DN2013 A	20160624	LSPB	+	published / reissued
IN05449DN2013 A	20141205	LSPB	+	published / reissued
IN06809DN2014 A	20150522	LSPB	+	published / reissued
IN06814DN2012 A	20140117	LSPB	+	published / reissued
IN11150DN2014 A	20150925	LSPB	+	published / reissued
IN201617012519 A	20160831	LSPB	+	published / reissued
IN258307 B	20140103	LSGT	+	granted / extensions (spc, cpc, pte)
IN270580 B	20160108	LSGT	+	granted / extensions (spc, cpc, pte)
MX2008011817 A1	20081031	LSPB	+	published / reissued
MX2010009191 A1	20100910	LSPB	+	published / reissued
MX2010009191 A1	20111007	LSGT	+FG	GRANT OR REGISTRATION
MX2011002715 A1	20110421	LSPB	+	published / reissued
MX2011002715 A1	20120705	LSGT	+FG	GRANT OR REGISTRATION
MX2011004542 A1	20110525	LSPB	+	published / reissued
MX2011004542 A1	20141029	LSGT	+FG	GRANT OR REGISTRATION
MX2011004630 A1	20110620	LSPB	+	published / reissued
MX2011004630 A1	20120913	LSGT	+FG	GRANT OR REGISTRATION
MX2011010225 A1	20111017	LSPB	+	published / reissued
MX2011010225 A1	20140401	LSGT	+FG	GRANT OR REGISTRATION
MX2012004976 A1	20120613	LSPB	+	published / reissued
MX2012004976 A1	20131008	LSGT	+FG	GRANT OR REGISTRATION
MX2012004981 A1	20120613	LSPB	+	published / reissued
MX2012007826 A1	20120815	LSPB	+	published / reissued

MX2012007826 A1	20140508	LSGT	+FG	GRANT OR REGISTRATION	
MX2012014583 A1	20130422	LSPB	+	published / reissued	
MX2012014583 A1	20140919	LSGT	+FG	GRANT OR REGISTRATION	
MX2012014984 A1	20130226	LSPB	+	published / reissued	
MX2012014984 A1	20140325	LSGT	+FG	GRANT OR REGISTRATION	
MX2013003268 A1	20130424	LSPB	+	published / reissued	
MX2013007266 A1	20131030	LSPB	+	published / reissued	
MX2013007395 A1	20131202	LSPB	+	published / reissued	
MX2014009888 A1	20141113	LSPB	+	published / reissued	
MX2014010133 A1	20140908	LSPB	+	published / reissued	
MX2014011020 A1	20150501	LSPB	+	published / reissued	
MX2014012972 A1	20150305	LSPB	+	published / reissued	
MX2014015364 A1	20150511	LSPB	+	published / reissued	
MX2015002335 A1	20150923	LSPB	+	published / reissued	
MX2015002469 A1	20150921	LSPB	+	published / reissued	
MX2015004677 A1	20160112	LSPB	+	published / reissued	
MX2015006334 A1	20160120	LSPB	+	published / reissued	
MX2015013558 A1	20160205	LSPB	+	published / reissued	
MX2016000189 A1	20160309	LSPB	+	published / reissued	
MX2016005289 A1	20160712	LSPB	+	published / reissued	
MY152295 A	20140915	LSGT	+	granted / extensions (spc, cpc, pte)	
MY157489 A	20160615	LSGT	+	granted / extensions (spc, cpc, pte)	
NO20081139 A	20080609	LSPB	+	published / reissued	
NO20081139 A	20170320	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	
NO20083987 A	20081017	LSPB	+	published / reissued	
NO20083987 A	20111024	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	
NO20140725 A	20150223	LSPB	+	published / reissued	
NO20160020 A	20160106	LSPB	+	published / reissued	
NO20160668 A	20160421	LSPB	+	published / reissued	
NZ587396 A	20120727	LSPB	+	published / reissued	
NZ587396 A	20121130	LSGT	+PSEA	PATENT SEALED	
NZ587396 A	20130531	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	TEXT : PATENT RENEWED FOR 3 YEARS UNTIL 03 FEB 2016 BY THOMSON REUTERS EFFECTIVE DATE : 20130501
NZ587396 A	20160129	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	TEXT : PATENT RENEWED FOR 1 YEAR UNTIL 03 FEB 2017 BY THOMSON REUTERS

					EFFECTIVE DATE : 20160115
NZ587396 A	20170127	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	TEXT : PATENT RENEWED FOR 1 YEAR UNTIL 03 FEB 2018 BY THOMSON REUTERS EFFECTIVE DATE : 20170120
NZ612235 A	20160226	LSPB	+	published / reissued	
NZ612235 A	20160527	LSGT	+PSEA	PATENT SEALED	
NZ612235 A	20160729	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 1 YEAR UNTIL 10 JUL 2017 BY AJ PARK EFFECTIVE DATE : 20160727
NZ612238 A	20141031	LSPB	+	published / reissued	
NZ612238 A	20150227	LSGT	+PSEA	PATENT SEALED	
NZ612238 A	20160624	LSLE	-LAPS	PATENT LAPSED	
NZ612238 A	20170127	LSRE	S35A	APPLICATION FOR PROCEEDINGS UNDER SECTION 35 (RESTORATION OF LAPSED PATENTS)	
NZ612238 A	20170428	LSRE	+S35R	PROCEEDINGS UNDER SECTION 35 (RESTORATION OF LAPSED PATENTS): PATENT RESTORED	
NZ630005 A	20150529	LSPB	+	published / reissued	
NZ630005 A	20150925	LSGT	+PSEA	PATENT SEALED	
NZ630005 A	20151127	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 1 YEAR UNTIL 21 DEC 2016 BY THOMSON REUTERS EFFECTIVE DATE : 20151030
NZ630005 A	20161125	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 1 YEAR UNTIL 21 DEC 2017 BY THOMSON REUTERS EFFECTIVE DATE : 20161117
NZ703794 A	20160129	LSPB	+	published / reissued	
NZ703794 A	20160527	LSGT	+PSEA	PATENT SEALED	
NZ703794 A	20160729	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 3 YEARS UNTIL 21 DEC 2018 BY AJ PARK EFFECTIVE DATE : 20160726
RU2008113764 A	20091020	LSPB	+	published / reissued	
RU2008142119 A	20100427	LSPB	+	published / reissued	
RU2008142119 A	20110820	LSWD	-FA92	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	EFFECTIVE DATE : 20110328
RU2010138781 A	20120327	LSPB	+	published / reissued	
RU2011145023 A	20130520	LSPB	+	published / reissued	
RU2013119991 A	20141110	LSPB	+	published / reissued	
RU2013129542 A	20150110	LSPB	+	published / reissued	
RU2013133823 A	20150127	LSPB	+	published / reissued	
RU2013143445 A	20150327	LSPB	+	published / reissued	
RU2014137467 A	20160410	LSPB	+	published / reissued	
RU2015113607 A	20161210	LSPB	+	published / reissued	
RU2015118699 A	20170202	LSPB	+	published / reissued	

RU2015131334 A	20151227	LSPB	+	published / reissued	
RU2404143 C2	20101120	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2507379 C2	20140220	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2562627 C2	20150910	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2566836 C2	20151027	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2584431 C2	20160520	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2599744 C1	20161010	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2601953 C1	20161110	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2612763 C2	20170313	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2617493 C2	20170425	LSGT	+	granted / extensions (spc, cpc, pte)	
TH127400 A	20130920	LSPB	+	published / reissued	
TH127447 A	20130920	LSPB	+	published / reissued	
TH129188 A	20131114	LSPB	+	published / reissued	
TH135112 A	20140708	LSPB	+	published / reissued	
TH135113 A	20140708	LSPB	+	published / reissued	
TH136484 A	20140909	LSPB	+	published / reissued	
TH146129 A	20160304	LSPB	+	published / reissued	
TH146375 A	20160229	LSPB	+	published / reissued	
TH148298 A	20160401	LSPB	+	published / reissued	
TH151603 A	20160603	LSPB	+	published / reissued	
TH151750 A	20160603	LSPB	+	published / reissued	
US2005173117 AA	20050811	LSPB	+	published / reissued	
US2006162926 AA	20060727	LSPB	+	published / reissued	
US2006166834 AA	20060727	LSPB	+	published / reissued	
US2006166834 AA	20060324	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., UNITED KINGDOM DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RODDY, CRAIG W.; REEL/FRAME:017687/0272 EFFECTIVE DATE : 20060323
US2006166834 AA	20080122	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : RE-RECORD TO CORRECT A DOCUMENT PREVIOUSLY RECORDED AT REEL 017687, FRAME 0272. (ASSIGNMENT OF ASSIGNOR'S INTEREST); ASSIGNOR:RODDY, CRAIG W.; REEL/FRAME:020414/0552 EFFECTIVE DATE : 20060323

US2006166834 AA	20150820	LSWD	-ABD2	Abandoned -- Failure to Pay Issue Fee	
US2007056475 AA	20070315	LSPB	+	published / reissued	
US2007056734 AA	20070315	LSPB	+	published / reissued	
US2008110619 AA	20080515	LSPB	+	published / reissued	
US2008156491 AA	20080703	LSPB	+	published / reissued	
US2008277116 AA	20081113	LSPB	+	published / reissued	
US2009071650 AA	20090319	LSPB	+	published / reissued	
US2009088348 AA	20090402	LSPB	+	published / reissued	
US2009114126 AA	20090507	LSPB	+	published / reissued	
US2009120644 AA	20090514	LSPB	+	published / reissued	
US2009120644 AA	20090120	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; MORGAN, RONNIE G.; REEL/FRA:022129/0758; SIGNING DATES FROM 20081201 TO 20090102
US2009124522 AA	20090514	LSPB	+	published / reissued	
US2009139719 AA	20090604	LSPB	+	published / reissued	
US2009139719 AA	20081105	LSAS	AS	ASSIGNMENT	OWNER NAME : KENT, ROBERT A., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LUO, HONGYU; NORMAN, LEWIS R.; POWELL, RONALD J.; AND OTHERS; REEL/FRA:021864/0815; SIGNING DATES FROM 20081029 TO 20081104
US2009200029 AA	20090813	LSPB	+	published / reissued	
US2009236097 AA	20090924	LSPB	+	published / reissued	
US2009236097 AA	20090527	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; AND OTHERS; REEL/FRA:022738/0148; SIGNING DATES FROM 20090421 TO 20090429
US2009260544 AA	20091022	LSPB	+	published / reissued	
US2009260544 AA	20090421	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; REEL/FRA:022576/0635 EFFECTIVE DATE : 20070510
US2009283269 AA	20091119	LSPB	+	published / reissued	
US2009312445 AA	20091217	LSPB	+	published / reissued	
US2009312445 AA	20090820	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; KING,

					BOBBY J.; AND OTHERS; SIGNING DATES FROM 20081104 TO 20081105; REEL/FRAME:023126/0291
US2009312445 AA	20090820	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; KING, BOBBY J. AND OTHERS; SIGNED BETWEEN 20081104 AND 20081105; REEL/FRAME:23126/291
US2009320720 AA	20091231	LSPB	+	published / reissued	
US2009320720 AA	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:023221/0146; SIGNING DATES FROM 20081014 TO 20081015
US2010016183 AA	20100121	LSPB	+	published / reissued	
US2010016183 AA	20090927	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; COVINGTON, RICKY L.; REEL/FRAME:023288/0110 EFFECTIVE DATE : 20090925
US2010016183 AA	20090927	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; COVINGTON, RICKY L.; US-ASSIGNMENT DATABASE UPDATED:20100413; REEL/FRAME:23288/110 EFFECTIVE DATE : 20090925
US2010025039 AA	20100204	LSPB	+	published / reissued	
US2010041792 AA	20100218	LSPB	+	published / reissued	
US2010041792 AA	20091030	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD AND OTHERS; US-ASSIGNMENT DATABASE UPDATED:20100218; REEL/FRAME:23452/252 EFFECTIVE DATE : 20091030
US2010044043 AA	20100225	LSPB	+	published / reissued	
US2010044043 AA	20091027	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD AND OTHERS; SIGNED BETWEEN 20091022 AND 20091026; US-ASSIGNMENT DATABASE UPDATED:20100225; REEL/FRAME:23428/577
US2010095871 AA	20100422	LSPB	+	published / reissued	
US2010095871 AA	20100104	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; REDDY, B. RAGHAVA; CHATTERJI, JITEN AND OTHERS; SIGNED BETWEEN

					20091104 AND 20091113; US-ASSIGNMENT DATABASE UPDATED:20100422; REEL/FRAME:23729/64
US2010095871 AA	20100104	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; REDDY, B. RAGHAVA; CHATTERJI, JITEN; AND OTHERS; SIGNING DATES FROM 20091104 TO 20091113; REEL/FRAME:023729/0064
US2010096135 AA	20100422	LSPB	+	published / reissued	
US2010096135 AA	20090504	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; SIGNED BETWEEN 20090420 AND 20090429; US-ASSIGNMENT DATABASE UPDATED:20100422; REEL/FRAME:22635/63
US2010258312 AA	20101014	LSPB	+	published / reissued	
US2010258312 AA	20100623	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, D. CHAD; RODDY, CRAIG W.; HUDGINS, CALLIE R.; ANDOTHERS; SIGNING DATES FROM 20100617 TO 20100621; REEL/FRAME:024581/0033
US2010273912 AA	20101028	LSPB	+	published / reissued	
US2010273912 AA	20100709	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; AND OTHERS; SIGNING DATES FROM 20090421 TO 20090429; REEL/FRAME:024658/0133
US2010282466 AA	20101111	LSPB	+	published / reissued	
US2010292365 AA	20101118	LSPB	+	published / reissued	
US2010292365 AA	20100728	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:024756/0301 EFFECTIVE DATE : 20091030
US2011017452 AA	20110127	LSPB	+	published / reissued	
US2011017452 AA	20100930	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENKLEY, JAMES ROBERT; BRENNEIS, D. CHAD; RODDY, CRAIG W.; SIGNING DATES FROM 20100929 TO 20100930; REEL/FRAME:025074/0347
US2011100626 AA	20110505	LSPB	+	published / reissued	

US2011100626 AA	20101228	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, D. CHAD; KARCHER, JEFFERY D.; RODDY, CRAIG W.; REEL/FRAME:025545/0084 EFFECTIVE DATE : 20101220
US2011162845 AA	20110707	LSPB	+	published / reissued	
US2011162845 AA	20110321	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RAVI, KRISHNA; PATIL, RAHUL CHANDRAKANT; PATIL, SANDIP PRABHAKAR; AND OTHERS; SIGNING DATES FROM 20110125 TO 20110208; REEL/FRAME:025989/0384
US2012145393 AA	20120614	LSPB	+	published / reissued	
US2012152539 AA	20120621	LSPB	+	published / reissued	
US2012167803 AA	20120705	LSPB	+	published / reissued	
US2012167803 AA	20120312	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LUO, HONGYU; NORMAN, LEWIS R.; POWELL, RONALD J.; AND OTHERS; SIGNING DATES FROM 20081029 TO 20081104; REEL/FRAME:027848/0186
US2012186494 AA	20120726	LSPB	+	published / reissued	
US2012190769 AA	20120726	LSPB	+	published / reissued	
US2012190769 AA	20120330	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PATIL, RAHUL CHANDRAKANT; DESHPANDE, ABHIMANYU; GORDON, CHRISTOPHER L.; AND OTHERS; SIGNING DATES FROM 20091104 TO 20091113; REEL/FRAME:027965/0014
US2012192768 AA	20120802	LSPB	+	published / reissued	
US2012192768 AA	20120411	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RAVI, KRISHNA; PATIL, RAHUL CHANDRAKANT; PATIL, SANDIP PRABHAKAR; AND OTHERS; SIGNING DATES FROM 20110125 TO 20110208; REEL/FRAME:028025/0251
US2012193097 AA	20120802	LSPB	+	published / reissued	
US2012193097 AA	20120423	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:028086/0390 EFFECTIVE DATE : 20050908
US2012211227 AA	20120823	LSPB	+	published / reissued	

US2012211227 AA	20120427	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNNORS INTEREST; ASSIGNNORS:THAEMLITZ, CARL J.; RODDY, CRAIG W.; COVINGTON, RICKY L.; AND OTHERS; SIGNING DATES FROM 20120423 TO 20120425; REEL/FRAAME:028120/0482
US2012227631 AA	20120913	LSPB	+	published / reissued	
US2012227631 AA	20120522	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNNORS INTEREST; ASSIGNNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, CHAD; AND OTHERS; REEL/FRAAME:028250/0611 EFFECTIVE DATE : 20120217
US2012234541 AA	20120920	LSPB	+	published / reissued	
US2012234541 AA	20120524	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNNORS INTEREST; ASSIGNNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; SIGNING DATES FROM 20120514 TO 20120517; REEL/FRAAME:028263/0134
US2012260828 AA	20121018	LSPB	+	published / reissued	
US2012260828 AA	20120627	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNNORS INTEREST; ASSIGNNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAAME:028456/0169 EFFECTIVE DATE : 20050908
US2012267107 AA	20121025	LSPB	+	published / reissued	
US2012267107 AA	20120627	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNNORS INTEREST; ASSIGNNORS:BENKLEY, JAMES ROBERT; SPENCER, JOSEPH V.; KRANZ, ZACHARY ROBERT; AND OTHERS; SIGNING DATES FROM 20120622 TO 20120627; REEL/FRAAME:028455/0924
US2012291674 AA	20121122	LSPB	+	published / reissued	
US2012291674 AA	20120727	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNNORS INTEREST; ASSIGNNORS:BRENNEIS, D. CHAD; RODDY, CRAIG W.; KARCHER, JEFFERY D.; AND OTHERS; SIGNING DATES FROM 20100617 TO 20100621; REEL/FRAAME:028660/0118
US2012318506 AA	20121220	LSPB	+	published / reissued	
US2012318506 AA	20120827	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNNORS INTEREST; ASSIGNNORS:BENKLEY, JAMES ROBERT; BRENNEIS, D. CHAD; RODDY, CRAIG W.; SIGNING

DATES FROM 20120823 TO
20120824;
REEL/FRAME:028854/0610

US2012325119 AA	20121227	LSPB	+	published / reissued	
US2012325119 AA	20120907	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, CHAD; KARCHER, JEFFERY; RODDY, CRAIG W.; REEL/FRAME:028912/0842 EFFECTIVE DATE : 20101220
US2012325476 AA	20121227	LSPB	+	published / reissued	
US2012325476 AA	20120906	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, D. CHAD; RODDY, CRAIG W.; MORGAN, RICKEY L.; AND OTHERS; REEL/FRAME:028911/0456 EFFECTIVE DATE : 20120905
US2012325476 AA	20170511	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US2012325477 AA	20121227	LSPB	+	published / reissued	
US2012325477 AA	20120907	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, CHAD; KARCHER, JEFFERY; RODDY, CRAIG W.; REEL/FRAME:028912/0751 EFFECTIVE DATE : 20101220
US2012328377 AA	20121227	LSPB	+	published / reissued	
US2012328377 AA	20120829	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, D. CHAD; RODDY, CRAIG W.; JONES, PAUL J.; AND OTHERS; REEL/FRAME:028871/0342 EFFECTIVE DATE : 20120827
US2012328377 AA	20170315	LSRV	-FRM1	Final Rejection Mailed	
US2013008351 AA	20130110	LSPB	+	published / reissued	
US2013008351 AA	20120914	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; SIGNING DATES FROM 20120514 TO 20120517; REEL/FRAME:028965/0095
US2013008352 AA	20130110	LSPB	+	published / reissued	
US2013008352 AA	20120914	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, CHAD; AND OTHERS; REEL/FRAME:028964/0938 EFFECTIVE DATE : 20120217
US2013048286 AA	20130228	LSPB	+	published / reissued	

US2013061779 AA	20130314	LSPB	+	published / reissued	
US2013061779 AA	20121105	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, CHAD; KARCHER, JEFFERY; RODDY, CRAIG W.; REEL/FRAME:029242/0665 EFFECTIVE DATE : 20101220
US2013112405 AA	20130509	LSPB	+	published / reissued	
US2013112405 AA	20130118	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNEIS, D. CHAD; KEYS, CRYSTAL L.; AND OTHERS; SIGNING DATES FROM 20130103 TO 20130107; REEL/FRAME:029654/0089
US2013153214 AA	20130620	LSPB	+	published / reissued	
US2013153214 AA	20130225	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; MORGAN, RONNIE G.; BENKLEY, JAMES R.; AND OTHERS; REEL/FRAME:029865/0845 EFFECTIVE DATE : 20130220
US2013153214 AA	20170330	LSRV	-FRM1	Final Rejection Mailed	
US2013157903 AA	20130620	LSPB	+	published / reissued	
US2013157903 AA	20130214	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENKLEY, JAMES ROBERT; BRENNEIS, D. CHAD; RODDY, CRAIG W.; SIGNING DATES FROM 20100929 TO 20100930; REEL/FRAME:029815/0070
US2013210685 AA	20130815	LSPB	+	published / reissued	
US2013210685 AA	20130327	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNEIS, D. CHAD; KEYS, CRYSTAL L.; AND OTHERS; SIGNING DATES FROM 20130103 TO 20130107; REEL/FRAME:030100/0613
US2013213642 AA	20130822	LSPB	+	published / reissued	
US2013213643 AA	20130822	LSPB	+	published / reissued	
US2013213643 AA	20130327	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNEIS, D. CHAD; KEYS, CRYSTAL L.; AND OTHERS; SIGNING DATES FROM 20130103 TO 20130107; REEL/FRAME:030096/0777
US2013213643 AA	20150722	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	

US2013233538 AA	20130912	LSPB	+	published / reissued	
US2013244911 AA	20130919	LSPB	+	published / reissued	
US2013312641 AA	20131128	LSPB	+	published / reissued	
US2013312641 AA	20130731	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNEIS, DARRELL CHAD; ADAMS, BAYA; AND OTHERS; SIGNING DATES FROM 20130730 TO 20130731; REEL/FRAME:030915/0133
US2014008067 AA	20140109	LSPB	+	published / reissued	
US2014008067 AA	20130913	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG WAYNE; CHATTERJI, JITEN; CROMWELL, ROGER STANLEY; REEL/FRAME:031206/0148 EFFECTIVE DATE : 20130910
US2014048266 AA	20140220	LSPB	+	published / reissued	
US2014048266 AA	20131023	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MORGAN, RONNIE G.; BRENNIES, D. CHAD; RODDY, CRAIG W.; SIGNING DATES FROM 20121029 TO 20121030; REEL/FRAME:031463/0619
US2014060389 AA	20140306	LSPB	+	published / reissued	
US2014060389 AA	20131118	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNIES, DARRELL CHAD; ADAMS, BAYA; AND OTHERS; SIGNING DATES FROM 20130730 TO 20130731; REEL/FRAME:031620/0594
US2014083699 AA	20140327	LSPB	+	published / reissued	
US2014083699 AA	20131126	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG WAYNE; MENEZES, CLIVE DENIS; BENKLEY, JAMES ROBERT; AND OTHERS; SIGNING DATES FROM 20131118 TO 20131126; REEL/FRAME:031683/0075
US2014123879 AA	20140508	LSPB	+	published / reissued	
US2014123879 AA	20131230	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KARCHER, JEFFERY DWANE; BRENNEIS, D. CHAD; RODDY, CRAIG W.; AND OTHERS; REEL/FRAME:031860/0567 EFFECTIVE DATE : 20110708
US2014221257 AA	20140807	LSPB	+	published / reissued	

US2014221257 AA	20131231	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG WAYNE; CHATTERJI, JITEN; CROMWELL, ROGER STANLEY; REEL/FRAME:031863/0791 EFFECTIVE DATE : 20130910
US2014326446 AA	20141106	LSPB	+	published / reissued	
US2014326446 AA	20140623	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG WAYNE; MENEZES, CLIVE DENIS; BENKLEY, JAMES ROBERT; AND OTHERS; SIGNING DATES FROM 20131118 TO 20131126; REEL/FRAME:033160/0402
US2015107838 AA	20150423	LSPB	+	published / reissued	
US2015107838 AA	20141230	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNEIS, D. CHAD; KEYS, CRYSTAL L.; AND OTHERS; SIGNING DATES FROM 20130103 TO 20130107; REEL/FRAME:034602/0326
US2015107838 AA	20150916	LSRV	-FRM1	Final Rejection Mailed	
US2015184060 AA	20150702	LSPB	+	published / reissued	
US2015184060 AA	20150318	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MORGAN, RONNIE G.; BRENNEIS, D. CHAD; RODDY, CRAIG W.; SIGNING DATES FROM 20121029 TO 20121030; REEL/FRAME:035191/0052
US2015247383 AA	20150903	LSPB	+	published / reissued	
US2015247383 AA	20150515	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNEIS, D. CHAD; KEYS, CRYSTAL L.; AND OTHERS; SIGNING DATES FROM 20130103 TO 20130107; REEL/FRAME:035651/0784
US2015247383 AA	20170504	LSES	NFA1	Non Final Action Mailed	
US2016053158 AA	20160225	LSPB	+	published / reissued	
US2016053158 AA	20151030	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; COVINGTON, RICKY L.; REEL/FRAME:036927/0518 EFFECTIVE DATE : 20090925
US2017073568 AA	20170316	LSPB	+	published / reissued	
US2017073568 AA	20161115	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST;

					ASSIGNOR:RODDY, CRAIG W.; REEL/FRAME:040330/0329 EFFECTIVE DATE : 20090122
US7086466 BB	20060808	LSGT	+	granted / extensions (spc, cpc, pte)	
US7086466 BB	20040210	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RODDY, CRAIG W.; REEL/FRAME:014984/0195 EFFECTIVE DATE : 20040210
US7086466 BB	20100122	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7086466 BB	20140128	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7341104 BB	20080311	LSGT	+	granted / extensions (spc, cpc, pte)	
US7341104 BB	20060324	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RODDY, CRAIG W.; REEL/FRAME:017687/0275 EFFECTIVE DATE : 20060323
US7341104 BB	20080122	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : CORRECTIVE ASSIGNMENT (DOCUMENT) COVER SHEET PREVIOUSLY RECORDED AT REEL 017687 FRAME 0275; ASSIGNOR:RODDY, CRAIG W.; REEL/FRAME:020414/0070 EFFECTIVE DATE : 20060323
US7341104 BB	20080220	LSGT	PAT1	Patented Case	
US7341104 BB	20110824	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7341104 BB	20150825	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7353870 BB	20080408	LSGT	+	granted / extensions (spc, cpc, pte)	
US7353870 BB	20050909	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:016971/0014 EFFECTIVE DATE : 20050908
US7353870 BB	20110923	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7353870 BB	20150924	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7424913 BB	20080916	LSGT	+	granted / extensions (spc, cpc, pte)	
US7424913 BB	20080204	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RODDY, CRAIG W.; REEL/FRAME:020475/0984 EFFECTIVE DATE : 20080129
US7424913 BB	20080827	LSGT	PAT1	Patented Case	
US7424913 BB	20110923	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7424913 BB	20160223	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8

US7445669 BB	20081104	LSGT	+	granted / extensions (spc, cpc, pte)	
US7445669 BB	20050909	LSAS	AS	ASSIGNMENT	OWNER NAME : HILLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D CHAD; AND OTHERS; REEL/FRAME:016989/0826 EFFECTIVE DATE : 20050908
US7445669 BB	20120424	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7445669 BB	20160204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7478675 BB	20090120	LSGT	+	granted / extensions (spc, cpc, pte)	
US7478675 BB	20080229	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:020580/0575 EFFECTIVE DATE : 20080228
US7478675 BB	20081229	LSGT	PAT1	Patented Case	
US7478675 BB	20120625	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7478675 BB	20160425	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7559369 BB	20090714	LSGT	+	granted / extensions (spc, cpc, pte)	
US7559369 BB	20070511	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; REEL/FRAME:019356/0479 EFFECTIVE DATE : 20070510
US7559369 BB	20090624	LSGT	PAT1	Patented Case	
US7559369 BB	20090825	LSRE	CC	CERTIFICATE OF CORRECTION	
US7559369 BB	20130102	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7559369 BB	20161111	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7607482 BB	20091027	LSGT	+	granted / extensions (spc, cpc, pte)	
US7607482 BB	20081023	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:021753/0427; SIGNING DATES FROM 20081014 TO 20081015
US7607482 BB	20081209	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:021949/0439; SIGNING DATES FROM 20081014 TO 20081015

US7607482 BB	20091007	LSGT	PAT1	Patented Case	
US7607482 BB	20130318	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7607482 BB	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7607484 BB	20091027	LSGT	+	granted / extensions (spc, cpc, pte)	
US7607484 BB	20081121	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; KING, BOBBY J.; AND OTHERS; REEL/FRAME:021873/0926; SIGNING DATES FROM 20081104 TO 20081105
US7607484 BB	20091007	LSGT	PAT1	Patented Case	
US7607484 BB	20130318	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7607484 BB	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7617870 BA	20091117	LSGT	+	granted / extensions (spc, cpc, pte)	
US7617870 BA	20080604	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; KING, BOBBY J.; AND OTHERS; REEL/FRAME:021038/0592 EFFECTIVE DATE : 20080603
US7617870 BA	20091028	LSGT	PAT1	Patented Case	
US7617870 BA	20130318	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7617870 BA	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7631692 BB	20091215	LSGT	+	granted / extensions (spc, cpc, pte)	
US7631692 BB	20090416	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNIS, D. CHAD; AND OTHERS; REEL/FRAME:022555/0452; SIGNING DATES FROM 20090409 TO 20090413
US7631692 BB	20091124	LSGT	PAT1	Patented Case	
US7631692 BB	20120828	LSRE	CC	CERTIFICATE OF CORRECTION	
US7631692 BB	20130318	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7631692 BB	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7674332 BB	20100309	LSGT	+	granted / extensions (spc, cpc, pte)	
US7674332 BB	20090107	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNIS, D. CHAD; AND OTHERS; REEL/FRAME:022068/0806 EFFECTIVE DATE : 20080228

US7674332 BB	20090107	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:022068/0806 EFFECTIVE DATE : 20080228
US7674332 BB	20100217	LSGT	PAT1	Patented Case	
US7674332 BB	20130318	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7674332 BB	20170425	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7743828 BB	20100629	LSGT	+	granted / extensions (spc, cpc, pte)	
US7743828 BB	20091027	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD AND OTHERS; SIGNED BETWEEN 20091022 AND 20091026; REEL/FRAME:23428/577
US7743828 BB	20091027	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; SIGNING DATES FROM 20091022 TO 20091026; REEL/FRAME:023428/0577
US7743828 BB	20100609	LSGT	PAT1	Patented Case	
US7743828 BB	20120828	LSRE	CC	CERTIFICATE OF CORRECTION	
US7743828 BB	20131126	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7784542 BB	20100831	LSGT	+	granted / extensions (spc, cpc, pte)	
US7784542 BB	20090527	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; AND OTHERS; REEL/FRAME:022738/0148; SIGNING DATES FROM 20090421 TO 20090429
US7784542 BB	20090527	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; AND OTHERS; SIGNING DATES FROM 20090421 TO 20090429; REEL/FRAME:022738/0148
US7784542 BB	20100811	LSGT	PAT1	Patented Case	
US7784542 BB	20140128	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7789150 BB	20100907	LSGT	+	granted / extensions (spc, cpc, pte)	
US7789150 BB	20091030	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND

US7789150 BB	20091030	LSAS	AS	ASSIGNMENT	OTHERS; REEL/FRAME:023452/0252 EFFECTIVE DATE : 20091030 OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:023452/0252 EFFECTIVE DATE : 20091030
US7789150 BB	20100818	LSGT	PAT1	Patented Case	
US7789150 BB	20120828	LSRE	CC	CERTIFICATE OF CORRECTION	
US7789150 BB	20140225	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7806183 BB	20101005	LSGT	+	granted / extensions (spc, cpc, pte)	
US7806183 BB	20090504	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; SIGNINGDATES FROM 20090420 TO 20090429; REEL/FRAME:022635/0063
US7806183 BB	20090504	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; SIGNINGDATES FROM 20090420 TO 20090429; REEL/FRAME:022635/0063
US7806183 BB	20100915	LSGT	PAT1	Patented Case	
US7806183 BB	20140326	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7892352 BB	20110222	LSGT	+	granted / extensions (spc, cpc, pte)	
US7892352 BB	20090421	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; REEL/FRAME:022576/0635 EFFECTIVE DATE : 20070510
US7892352 BB	20110202	LSGT	PAT1	Patented Case	
US7892352 BB	20140725	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7927419 BB	20110419	LSGT	+	granted / extensions (spc, cpc, pte)	
US7927419 BB	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:023221/0146; SIGNING DATES FROM 20081014 TO 20081015
US7927419 BB	20090911	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; SIGNING DATES FROM 20081014 TO 20081015;

US7927419 BB	20110330	LSGT	PAT1	Patented Case	
US7927419 BB	20140924	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8030253 BB	20111004	LSGT	+	granted / extensions (spc, cpc, pte)	
US8030253 BB	20090820	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; KING, BOBBY J.; AND OTHERS; SIGNING DATES FROM 20081104 TO 20081105; REEL/FRAME:023126/0291
US8030253 BB	20110914	LSGT	PAT1	Patented Case	
US8030253 BB	20150325	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8183186 BB	20120522	LSGT	+	granted / extensions (spc, cpc, pte)	
US8183186 BB	20081105	LSAS	AS	ASSIGNMENT	OWNER NAME : KENT, ROBERT A., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LUO, HONGYU; NORMAN, LEWIS R.; POWELL, RONALD J.; AND OTHERS; REEL/FRAME:021864/0815; SIGNING DATES FROM 20081029 TO 20081104
US8183186 BB	20081105	LSAS	AS	ASSIGNMENT	OWNER NAME : KENT, ROBERT A., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LUO, HONGYU; NORMAN, LEWIS R.; POWELL, RONALD J.; AND OTHERS; SIGNING DATES FROM 20081029 TO 20081104; REEL/FRAME:021864/0815
US8183186 BB	20120502	LSGT	PAT1	Patented Case	
US8183186 BB	20151027	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8261827 BB	20120911	LSGT	+	granted / extensions (spc, cpc, pte)	
US8261827 BB	20120423	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:028086/0390 EFFECTIVE DATE : 20050908
US8261827 BB	20120822	LSGT	PAT1	Patented Case	
US8261827 BB	20160223	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8281859 BB	20121009	LSGT	+	granted / extensions (spc, cpc, pte)	
US8281859 BB	20120220	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, CHAD; AND OTHERS; REEL/FRAME:027731/0334 EFFECTIVE DATE : 20120217
US8281859 BB	20120919	LSGT	PAT1	Patented Case	
US8281859 BB	20160204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8297357 BB	20121030	LSGT	+	granted / extensions (spc,	

cpc, pte)					
US8297357 BB	20100727	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, D. CHAD; RODDY, CRAIG W.; BENKLEY, JAMES R.; AND OTHERS; SIGNING DATES FROM 20100624 TO 20100712; REEL/FRAME:024745/0431
US8297357 BB	20121010	LSGT	PAT1	Patented Case	
US8297357 BB	20160204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8307899 BB	20121113	LSGT	+	granted / extensions (spc, cpc, pte)	
US8307899 BB	20100623	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, D. CHAD; RODDY, CRAIG W.; HUDGINS, CALLIE R.; AND OTHERS; SIGNING DATES FROM 20100617 TO 20100621; REEL/FRAME:024581/0033
US8307899 BB	20121024	LSGT	PAT1	Patented Case	
US8307899 BB	20160204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8318642 BB	20121127	LSGT	+	granted / extensions (spc, cpc, pte)	
US8318642 BB	20120627	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:028456/0169 EFFECTIVE DATE : 20050908
US8318642 BB	20121107	LSGT	PAT1	Patented Case	
US8318642 BB	20160204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8324137 BB	20121204	LSGT	+	granted / extensions (spc, cpc, pte)	
US8324137 BB	20100728	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; REEL/FRAME:024756/0301 EFFECTIVE DATE : 20091030
US8324137 BB	20121114	LSGT	PAT1	Patented Case	
US8324137 BB	20130212	LSRE	CC	CERTIFICATE OF CORRECTION	
US8324137 BB	20160204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8327939 BB	20121211	LSGT	+	granted / extensions (spc, cpc, pte)	
US8327939 BB	20120524	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; SIGNING DATES FROM 20120514 TO 20120517; REEL/FRAME:028263/0134

US8327939 BB	20121121	LSGT	PAT1	Patented Case	
US8327939 BB	20160127	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8333240 BB	20121218	LSGT	+	granted / extensions (spc, cpc, pte)	
US8333240 BB	20090120	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; MORGAN, RONNIE G.; REEL/FRAME:022129/0758; SIGNING DATES FROM 20081201 TO 20090102
US8333240 BB	20090120	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; MORGAN, RONNIE G.; SIGNING DATES FROM 20081201 TO 20090102; REEL/FRAME:022129/0758
US8333240 BB	20121128	LSGT	PAT1	Patented Case	
US8333240 BB	20160127	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8399387 BB	20130319	LSGT	+	granted / extensions (spc, cpc, pte)	
US8399387 BB	20120914	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; BRENNEIS, D. CHAD; AND OTHERS; SIGNING DATES FROM 20120514 TO 20120517; REEL/FRAME:028965/0095
US8399387 BB	20130227	LSGT	PAT1	Patented Case	
US8399387 BB	20160425	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8403045 BB	20130326	LSGT	+	granted / extensions (spc, cpc, pte)	
US8403045 BB	20101228	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, D. CHAD; KARCHER, JEFFERY D.; RODDY, CRAIG W.; REEL/FRAME:025545/0084 EFFECTIVE DATE : 20101220
US8403045 BB	20160425	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8434553 BB	20130507	LSGT	+	granted / extensions (spc, cpc, pte)	
US8434553 BB	20120907	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, CHAD; KARCHER, JEFFERY; RODDY, CRAIG W.; REEL/FRAME:028912/0751 EFFECTIVE DATE : 20101220
US8434553 BB	20130417	LSGT	PAT1	Patented Case	
US8434553 BB	20160725	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8440596 BB	20130514	LSGT	+	granted / extensions (spc, cpc, pte)	
US8440596 BB	20120907	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.,

					TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, CHAD; KARCHER, JEFFERY; RODDY, CRAIG W.; REEL/FRAME:028912/0842 EFFECTIVE DATE : 20101220
US8440596 BB	20130424	LSGT	PAT1	Patented Case	
US8440596 BB	20160725	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8476203 BB	20130702	LSGT	+	granted / extensions (spc, cpc, pte)	
US8476203 BB	20100104	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.,TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; REDDY, B. RAGHAVA; CHATTERJI, JITEN; AND OTHERS; SIGNING DATES FROM 20091104 TO 20091113; REEL/FRAME:023729/0064
US8476203 BB	20100104	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; REDDY, B. RAGHAVA; CHATTERJI, JITEN; AND OTHERS; SIGNING DATES FROM 20091104 TO 20091113; REEL/FRAME:023729/0064
US8476203 BB	20130612	LSGT	PAT1	Patented Case	
US8476203 BB	20161111	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8486868 BB	20130716	LSGT	+	granted / extensions (spc, cpc, pte)	
US8486868 BB	20121105	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, CHAD; KARCHER, JEFFERY; RODDY, CRAIG W.; REEL/FRAME:029242/0665 EFFECTIVE DATE : 20101220
US8486868 BB	20130626	LSGT	PAT1	Patented Case	
US8486868 BB	20161111	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8486869 BB	20130716	LSGT	+	granted / extensions (spc, cpc, pte)	
US8486869 BB	20120727	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BRENNEIS, D. CHAD; RODDY, CRAIG W.; KARCHER, JEFFERY D.; AND OTHERS; SIGNING DATES FROM 20100617 TO 20100621; REEL/FRAME:028660/0118
US8486869 BB	20130626	LSGT	PAT1	Patented Case	
US8486869 BB	20161111	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8505629 BB	20130813	LSGT	+	granted / extensions (spc, cpc, pte)	
US8505629 BB	20120627	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENKLEY, JAMES ROBERT; SPENCER, JOSEPH V.; KRANZ, ZACHARY ROBERT; AND OTHERS; SIGNING DATES

					FROM 20120622 TO 20120627; REEL/FRAME:028455/0924
US8505629 BB	20130724	LSGT	PAT1	Patented Case	
US8505629 BB	20161111	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8505630 BB	20130813	LSGT	+	granted / extensions (spc, cpc, pte)	
US8505630 BB	20130118	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNEIS, D. CHAD; KEYS, CRYSTAL L.; AND OTHERS; SIGNING DATES FROM 20130103 TO 20130107; REEL/FRAME:029654/0089
US8505630 BB	20130724	LSGT	PAT1	Patented Case	
US8505630 BB	20161111	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8522873 BB	20130903	LSGT	+	granted / extensions (spc, cpc, pte)	
US8522873 BB	20100930	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENKLEY, JAMES ROBERT; BRENNEIS, D. CHAD; RODDY, CRAIG W.; SIGNING DATES FROM 20100929 TO 20100930; REEL/FRAME:025074/0347
US8522873 BB	20130814	LSGT	PAT1	Patented Case	
US8522873 BB	20161111	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8544543 BB	20131001	LSGT	+	granted / extensions (spc, cpc, pte)	
US8544543 BB	20130327	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; BRENNEIS, D. CHAD; KEYS, CRYSTAL L.; AND OTHERS; SIGNING DATES FROM 20130103 TO 20130107; REEL/FRAME:030095/0936
US8544543 BB	20130911	LSGT	PAT1	Patented Case	
US8544543 BB	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8551923 BA	20131008	LSGT	+	granted / extensions (spc, cpc, pte)	
US8551923 BA	20130508	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BENKLEY, JAMES ROBERT; SPENCER, JOSEPH V.; KRANZ, ZACHARY ROBERT; AND OTHERS; SIGNING DATES FROM 20120622 TO 20120627; REEL/FRAME:030370/0941
US8551923 BA	20130918	LSGT	PAT1	Patented Case	
US8551923 BA	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8555967 BB	20131015	LSGT	+	granted / extensions (spc, cpc, pte)	
US8555967 BB	20130429	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON

					ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CHATTERJI, JITEN; MORGAN, RONNIE G.; RODDY, CRAIG W.; AND OTHERS; SIGNING DATES FROM 20130424 TO 20130426; REEL/FRAME:030303/0617
US8555967 BB	20130925	LSGT	PAT1	Patented Case	
US8555967 BB	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8586512 BB	20131119	LSGT	+	granted / extensions (spc, cpc, pte)	
US8586512 BB	20090927	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; COVINGTON, RICKY L.; CHATTERJI, JITEN; AND OTHERS; REEL/FRAME:023288/0093 EFFECTIVE DATE : 20090925
US8586512 BB	20090927	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; COVINGTON, RICKY L.; CHATTERJI, JITEN; AND OTHERS; REEL/FRAME:023288/0093 EFFECTIVE DATE : 20090925
US8586512 BB	20131030	LSGT	PAT1	Patented Case	
US8586512 BB	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8598093 BB	20131203	LSGT	+	granted / extensions (spc, cpc, pte)	
US8598093 BB	20100709	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; CHATTERJI, JITEN; CROMWELL, ROGER; AND OTHERS; SIGNING DATES FROM 20090421 TO 20090429; REEL/FRAME:024658/0133
US8598093 BB	20131113	LSGT	PAT1	Patented Case	
US8603952 BB	20131210	LSGT	+	granted / extensions (spc, cpc, pte)	
US8603952 BB	20120327	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; COVINGTON, RICKY L.; CHATTERJI, JITEN; AND OTHERS; REEL/FRAME:027940/0147 EFFECTIVE DATE : 20090925
US8603952 BB	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8609595 BB	20131217	LSGT	+	granted / extensions (spc, cpc, pte)	
US8609595 BB	20121030	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MORGAN, RONNIE G.; BRENNEIS, D. CHAD; RODDY, CRAIG W.; SIGNING

US8609595 BB	20131126	LSGT	PAT1	Patented Case	
US8609595 BB	20170206	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8672028 BB	20140318	LSGT	+	granted / extensions (spc, cpc, pte)	
US8672028 BB	20120709	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KARCHER, JEFFERY DWANE; BRENNIS, CHAD; RODDY, CRAIG W.; AND OTHERS; REEL/FRA:028513/0850 EFFECTIVE DATE : 20110708
US8672028 BB	20140226	LSGT	PAT1	Patented Case	
US8672028 BB	20170404	LSRE	CC	CERTIFICATE OF CORRECTION	
US8672028 BB	20170425	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8685903 BB	20140401	LSGT	+	granted / extensions (spc, cpc, pte)	
US8685903 BB	20140312	LSGT	PAT1	Patented Case	
US8691737 BB	20140408	LSGT	+	granted / extensions (spc, cpc, pte)	
US8691737 BB	20140319	LSGT	PAT1	Patented Case	
US8741818 BB	20140603	LSGT	+	granted / extensions (spc, cpc, pte)	
US8741818 BB	20140514	LSGT	PAT1	Patented Case	
US8895485 BB	20141125	LSGT	+	granted / extensions (spc, cpc, pte)	
US8895485 BB	20141105	LSGT	PAT1	Patented Case	
US8895486 BB	20141125	LSGT	+	granted / extensions (spc, cpc, pte)	
US8895486 BB	20141105	LSGT	PAT1	Patented Case	
US8921284 BB	20141230	LSGT	+	granted / extensions (spc, cpc, pte)	
US8921284 BB	20141210	LSGT	PAT1	Patented Case	
US8940670 BB	20150127	LSGT	+	granted / extensions (spc, cpc, pte)	
US8950486 BB	20150210	LSGT	+	granted / extensions (spc, cpc, pte)	
US8950486 BB	20150121	LSGT	PAT1	Patented Case	
US9006154 BB	20150414	LSGT	+	granted / extensions (spc, cpc, pte)	
US9006154 BB	20150325	LSGT	PAT1	Patented Case	
US9006155 BB	20150414	LSGT	+	granted / extensions (spc, cpc, pte)	
US9006155 BB	20150325	LSGT	PAT1	Patented Case	
US9018147 BB	20150428	LSGT	+	granted / extensions (spc, cpc, pte)	
US9018147 BB	20150908	LSRE	CC	CERTIFICATE OF CORRECTION	
US9051505 BB	20150609	LSGT	+	granted / extensions (spc, cpc, pte)	
US9051505 BB	20150520	LSGT	PAT1	Patented Case	
US9150773 BB	20151006	LSGT	+	granted /	

				extensions (spc, cpc, pte)	
US9150773 BB	20150916	LSGT	PAT1	Patented Case	
US9157020 BB	20151013	LSGT	+	granted / extensions (spc, cpc, pte)	
US9157020 BB	20150923	LSGT	PAT1	Patented Case	
US9199879 BB	20151201	LSGT	+	granted / extensions (spc, cpc, pte)	
US9199879 BB	20151111	LSGT	PAT1	Patented Case	
US9206344 BB	20151208	LSGT	+	granted / extensions (spc, cpc, pte)	
US9206344 BB	20090927	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:RODDY, CRAIG W.; COVINGTON, RICKY L.; REEL/FRA:023288/0110 EFFECTIVE DATE : 20090925
US9206344 BB	20151118	LSGT	PAT1	Patented Case	
US9376609 BB	20160628	LSGT	+	granted / extensions (spc, cpc, pte)	
US9376609 BB	20160608	LSGT	PAT1	Patented Case	
US9512346 BB	20161206	LSGT	+	granted / extensions (spc, cpc, pte)	
US9512346 BB	20090120	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:RODDY, CRAIG W.; REEL/FRA:022129/0800 EFFECTIVE DATE : 20090102
US9512346 BB	20161116	LSGT	PAT1	Patented Case	
US9512346 BB	20170418	LSRE	CC	CERTIFICATE OF CORRECTION	
US9512351 BB	20161206	LSGT	+	granted / extensions (spc, cpc, pte)	
US9512351 BB	20161116	LSGT	PAT1	Patented Case	
US9512352 BB	20161206	LSGT	+	granted / extensions (spc, cpc, pte)	
US9512352 BB	20161116	LSGT	PAT1	Patented Case	
US9644132 BB	20170509	LSGT	+	granted / extensions (spc, cpc, pte)	
US9644132 BB	20170419	LSGT	PAT1	Patented Case	
WO05080287 A1	20050901	LSPB	+	published / reissued	
WO05080287 A1	20060811	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO05080287 A1	20060811	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE
WO07028952 A1	20070315	LSPB	+	published / reissued	
WO07028952 A1	20080304	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2621835 COUNTRY OF REF DOCUMENT : CA
WO07028952 A1	20080305	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006779199 COUNTRY OF REF DOCUMENT : EP
WO07028952 A1	20080307	LSNP	+WWE	WIPO INFORMATION:	REF DOCUMENT NUMBER : MX/A/2008/003291

				ENTRY INTO NATIONAL PHASE	COUNTRY OF REF DOCUMENT : MX
WO07028952 A1	20080311	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO07028952 A1	20080409	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008113764 COUNTRY OF REF DOCUMENT : RU
WO07028952 A1	20080611	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2006779199 COUNTRY OF REF DOCUMENT : EP
WO07110591 A1	20071004	LSPB	+	published / reissued	
WO07110591 A1	20080820	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2642930 COUNTRY OF REF DOCUMENT : CA
WO07110591 A1	20080901	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007231193 COUNTRY OF REF DOCUMENT : AU
WO07110591 A1	20080917	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : MX/A/2008/011817 COUNTRY OF REF DOCUMENT : MX
WO07110591 A1	20080919	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 0817239 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESCRIPTION : PCT FILING DATE = 20070321
WO07110591 A1	20080919	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 0817239.7 COUNTRY OF REF DOCUMENT : GB
WO07110591 A1	20080922	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008091573 COUNTRY OF REF DOCUMENT : EG
WO07110591 A1	20080925	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2007231193 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20070321 KIND CODE OF REF DOCUMENT : A
WO07110591 A1	20080925	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO07110591 A1	20081024	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2008142119 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO08139140 A1	20081120	LSPB	+	published / reissued	
WO08139140 A1	20090922	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2681606 COUNTRY OF REF DOCUMENT : CA
WO08139140 A1	20091111	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08139140 A1	20141223	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0811119 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20091109
WO09103944 A1	20090827	LSPB	+	published /	

reissued					
WO09103944 A1	20100805	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2714452 COUNTRY OF REF DOCUMENT : CA
WO09103944 A1	20100805	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2714452 COUNTRY OF REF DOCUMENT : CA
WO09103944 A1	20100816	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 587396 COUNTRY OF REF DOCUMENT : NZ
WO09103944 A1	20100824	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09103944 A1	20100826	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009216602 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090203 KIND CODE OF REF DOCUMENT : A
WO09103944 A1	20100921	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010138781 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO09103944 A1	20100921	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010138781 COUNTRY OF REF DOCUMENT : RU
WO09138747 A1	20091119	LSPB	+	published / reissued	
WO09138747 A1	20101116	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09138747 A1	20110615	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 09746064 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO10029281 A1	20100318	LSPB	+	published / reissued	
WO10029281 A1	20110304	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2736148 COUNTRY OF REF DOCUMENT : CA
WO10029281 A1	20110310	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009290758 COUNTRY OF REF DOCUMENT : AU
WO10029281 A1	20110312	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10029281 A1	20110331	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009290758 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090817 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO10029281 A1	20151201	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : P10918170 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20110311
WO10061162 A2	20100603	LSPB	+	published / reissued	
WO10061162 A2	20110427	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	REF DOCUMENT NUMBER : 2741824

WO10061162 A3	20110427	LSNP	ENP	IN: ENTRY INTO THE NATIONAL PHASE IN:	COUNTRY OF REF DOCUMENT : CA REF DOCUMENT NUMBER : 2741824 COUNTRY OF REF DOCUMENT : CA
WO10061162 A3	20110427	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2741824 COUNTRY OF REF DOCUMENT : CA
WO10061162 A3	20110428	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009321421 COUNTRY OF REF DOCUMENT : AU
WO10061162 A3	20110503	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10061162 A3	20110519	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009321421 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20091102 KIND CODE OF REF DOCUMENT : A
WO10061163 A1	20100603	LSPB	+	published / reissued	
WO10061163 A1	20110421	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2741491 COUNTRY OF REF DOCUMENT : CA
WO10061163 A1	20110428	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009321422 COUNTRY OF REF DOCUMENT : AU
WO10061163 A1	20110503	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10061163 A1	20110519	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009321422 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20091102 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO10061163 A1	20160216	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : P10921684 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20110503
WO10061164 A1	20100603	LSPB	+	published / reissued	
WO10061164 A1	20110503	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10061164 A1	20110914	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2755433 COUNTRY OF REF DOCUMENT : CA
WO10061164 A1	20110916	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009321423 COUNTRY OF REF DOCUMENT : AU
WO10061164 A1	20120216	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009321423 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20091102 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO10116143 A1	20101014	LSPB	+	published / reissued	

WO10116143 A1	20110929	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2757109 COUNTRY OF REF DOCUMENT : CA
WO10116143 A1	20111010	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10116143 A1	20111108	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011145023 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO10116143 A1	20111117	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010233555 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20100408 KIND CODE OF REF DOCUMENT : A
WO10116143 A1	20160426	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : P11014963 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20111007
WO10122277 A1	20101028	LSPB	+	published / reissued	
WO10122277 A1	20111011	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2758311 COUNTRY OF REF DOCUMENT : CA
WO10122277 A1	20111020	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10122277 A1	20111117	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010240744 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20100318 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO10122277 A1	20160329	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : P11013317 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20111019
WO10136760 A1	20101202	LSPB	+	published / reissued	
WO10136760 A1	20111118	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2762605 COUNTRY OF REF DOCUMENT : CA
WO10136760 A1	20111128	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO10136760 A1	20111208	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010252793 COUNTRY OF REF DOCUMENT : AU
WO10136760 A1	20120112	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010252793 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20100526 KIND CODE OF REF DOCUMENT : A
WO10136760 A1	20160315	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : P11011833 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20111125

WO11036462 A1	20110331	LSPB	+	published / reissued	
WO11036462 A1	20120315	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2774302 COUNTRY OF REF DOCUMENT : CA
WO11036462 A1	20120315	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2774302 COUNTRY OF REF DOCUMENT : CA
WO11036462 A1	20120327	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11036462 A1	20120418	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010299648 COUNTRY OF REF DOCUMENT : AU
WO11036462 A1	20120517	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010299648 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20100924 KIND CODE OF REF DOCUMENT : A
WO11036463 A1	20110331	LSPB	+	published / reissued	
WO11036463 A1	20120315	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2774306 COUNTRY OF REF DOCUMENT : CA
WO11036463 A1	20120315	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2774306 COUNTRY OF REF DOCUMENT : CA
WO11036463 A1	20120320	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010299649 COUNTRY OF REF DOCUMENT : AU
WO11036463 A1	20120327	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11036463 A1	20120412	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010299649 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20100924 KIND CODE OF REF DOCUMENT : A
WO11036463 A1	20160607	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012006871 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20120327
WO11051664 A1	20110505	LSPB	+	published / reissued	
WO11051664 A1	20120418	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010311158 COUNTRY OF REF DOCUMENT : AU
WO11051664 A1	20120419	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2778241 COUNTRY OF REF DOCUMENT : CA
WO11051664 A1	20120427	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11051664 A1	20120427	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1201001992 COUNTRY OF REF DOCUMENT : TH
WO11051664 A1	20120517	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	REF DOCUMENT NUMBER : 2010311158

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WO11051684 A1	20120418	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010311178 COUNTRY OF REF DOCUMENT : AU
WO11051684 A1	20120419	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2778242 COUNTRY OF REF DOCUMENT : CA
WO11051684 A1	20120419	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2778242 COUNTRY OF REF DOCUMENT : CA
WO11051684 A1	20120430	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11051684 A1	20120430	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1201002025 COUNTRY OF REF DOCUMENT : TH
WO11051684 A1	20120517	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2010311178 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20101029 KIND CODE OF REF DOCUMENT : A
WO11051684 A1	20160329	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012010269 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20120430
WO11080522 A1	20110707	LSPB	+	published / reissued	
WO11080522 A1	20120704	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11080522 A1	20120704	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1201003337 COUNTRY OF REF DOCUMENT : TH
WO11080522 A1	20120710	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2011203389 COUNTRY OF REF DOCUMENT : AU
WO11080522 A1	20120802	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011203389 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20110104 KIND CODE OF REF DOCUMENT : A
WO11080522 A1	20160412	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012016471 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20120703
WO11161405 A1	20111229	LSPB	+	published / reissued	
WO11161405 A1	20121214	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2802959 COUNTRY OF REF DOCUMENT : CA
WO11161405 A1	20121223	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO	REF DOCUMENT NUMBER : 1201006716 COUNTRY OF REF DOCUMENT

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WO11161405 A1	20121224	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11161405 A1	20130110	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011268758 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20110621 KIND CODE OF REF DOCUMENT : A
WO11161405 A1	20161108	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012032080 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20121214
WO12001343 A1	20120105	LSPB	+	published / reissued	
WO12001343 A1	20121219	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2803223 COUNTRY OF REF DOCUMENT : CA
WO12001343 A1	20121228	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12001343 A1	20121228	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1201006715 COUNTRY OF REF DOCUMENT : TH
WO12001343 A1	20130110	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011273259 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20110621 KIND CODE OF REF DOCUMENT : A
WO12001343 A1	20161122	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012033091 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20121221
WO12042210 A1	20120405	LSPB	+	published / reissued	
WO12042210 A1	20130212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2808133 COUNTRY OF REF DOCUMENT : CA
WO12042210 A1	20130402	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12042210 A1	20130411	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011309957 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20110928 KIND CODE OF REF DOCUMENT : A
WO12042210 A1	20130430	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013119991 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO12042210 A1	20160726	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112013004245 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20130222
WO12085509 A1	20120628	LSPB	+	published / reissued	
WO12085509 A1	20130704	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	REF DOCUMENT NUMBER : 2011346883

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WO12085509 A8	20130613	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2821573 COUNTRY OF REF DOCUMENT : CA
WO12085509 A8	20130621	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12085509 A8	20130704	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2011346883 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20111221 KIND CODE OF REF DOCUMENT : A
WO12085509 A8	20130722	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013133823 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO12085509 A8	20161018	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112013014863 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20130613
WO13009780 A1	20130117	LSPB	+	published / reissued	
WO13009780 A1	20130614	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2821931 COUNTRY OF REF DOCUMENT : CA
WO13009780 A1	20130627	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013129542 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO13009780 A1	20130711	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012282775 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120710 KIND CODE OF REF DOCUMENT : A
WO13009780 A1	20140113	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13009780 A1	20160927	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112013016242 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20130624
WO13123207 A2	20130822	LSPB	+	published / reissued	
WO13123207 A3	20140806	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2863987 COUNTRY OF REF DOCUMENT : CA
WO13123207 A3	20140814	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013221468 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130214 KIND CODE OF REF DOCUMENT : A
WO13163504 A1	20131031	LSPB	+	published / reissued	
WO13163504 A1	20141010	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	REF DOCUMENT NUMBER : 2870367

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WO13163504 A1	20141023	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013251467 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130426 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13163504 A1	20141027	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13163504 A1	20141126	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 201491980 COUNTRY OF REF DOCUMENT : EA
WO13177336 A1	20131128	LSPB	+	published / reissued	
WO13177336 A1	20140619	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013266319 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130522 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO13177336 A1	20140625	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2861662 COUNTRY OF REF DOCUMENT : CA
WO13177336 A1	20141124	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14004773 A1	20140103	LSPB	+	published / reissued	
WO14004773 A1	20141203	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2875660 COUNTRY OF REF DOCUMENT : CA
WO14004773 A1	20141218	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013280260 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130627 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14004773 A1	20141229	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14035923 A1	20140306	LSPB	+	published / reissued	
WO14035923 A1	20150212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2881910 COUNTRY OF REF DOCUMENT : CA
WO14035923 A1	20150219	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013309038 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130827 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14035923 A1	20150227	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14036218 A1	20140306	LSPB	+	published / reissued	
WO14036218 A1	20150223	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2882817 COUNTRY OF REF DOCUMENT : CA
WO14036218 A1	20150226	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013308769 COUNTRY OF REF DOCUMENT

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WO14036218 A1	20150302	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14066737 A1	20140501	LSPB	+	published / reissued	
WO14066737 A1	20150410	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2888162 COUNTRY OF REF DOCUMENT : CA
WO14066737 A1	20150427	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14066737 A1	20150430	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013334222 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20131025 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14066737 A1	20150526	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015113607 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14100604 A1	20140626	LSPB	+	published / reissued	
WO14100604 A1	20150514	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2891718 COUNTRY OF REF DOCUMENT : CA
WO14100604 A1	20150604	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013361111 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20131220 KIND CODE OF REF DOCUMENT : A
WO14100604 A1	20150622	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14100604 A1	20150721	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015118699 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO14127334 A1	20140821	LSPB	+	published / reissued	
WO14127334 A1	20150818	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14127334 A1	20160316	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14751219 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO14176491 A1	20141030	LSPB	+	published / reissued	
WO14176491 A1	20150917	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014256987 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140425 KIND CODE OF REF DOCUMENT : A
WO14176491 A1	20150921	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2907755 COUNTRY OF REF DOCUMENT : CA

WO14176491 A1	20151026	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15017564 A1	20150205	LSPB	+	published / reissued	
WO15017564 A1	20151127	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 1520970 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESCRIPTION : PCT FILING DATE = 20140730
WO15017564 A1	20151201	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2914252 COUNTRY OF REF DOCUMENT : CA
WO15017564 A1	20151231	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : P1751/2015 COUNTRY OF REF DOCUMENT : AE
WO15017564 A1	20160121	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014296231 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140730 KIND CODE OF REF DOCUMENT : A
WO15017564 A1	20160201	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15017564 A1	20160229	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016100193 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO15017564 A1	20160824	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14831300 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO15080977 A1	20150604	LSPB	+	published / reissued	
WO15080977 A1	20160329	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	TEXT : PCT FILING DATE = 20141121 REF DOCUMENT NUMBER : 201605237 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15080977 A1	20160401	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2926226 COUNTRY OF REF DOCUMENT : CA
WO15080977 A1	20160421	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014354985 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20141121 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15080977 A1	20160527	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15080977 A1	20160627	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016116019 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15080977 A1	20161221	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14865562 COUNTRY OF REF DOCUMENT : EP

Title: HARDENING AND SETTING ACCELERATOR ADDITIVE, USE OF THE LATTER AND METHOD FOR PRODUCING SAID ADDITIVE

Abstract: Source: US2009120329A The invention relates to a hardening and setting accelerator additive consisting of two components. The first component contains agents for developing the rigidity of the binding agent and the second component is an activating component and/or a texturing component.

Classifications:

International (IPC 8-9): C04B14/00 C04B14/10 C04B22/06 C04B22/08 C04B22/14 C04B24/04 C04B24/06 C04B28/00

C04B28/02 C04B40/00 (Advanced/Invention);

C04B103/14 (Advanced/Non-invention);

C04B14/00 C04B22/00 C04B24/00 C04B28/00

C04B40/00 (Core/Invention)

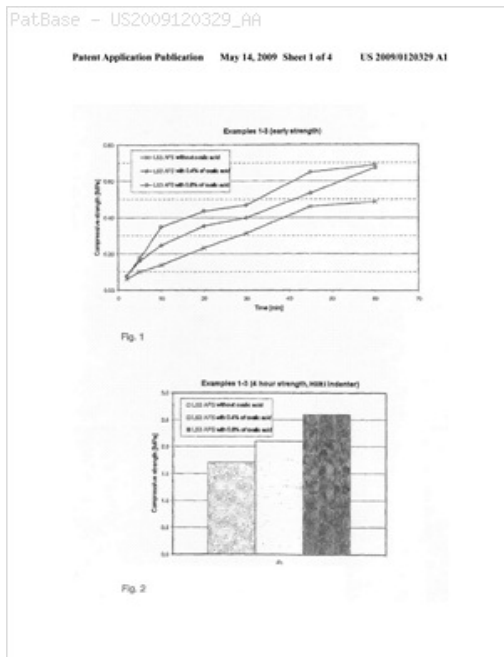
CPC: C04B28/02 C04B40/0039 C04B2103/12 C04B2103/14

C04B2111/00146

European: C04B28/02 C04B40/00D4 M04B103/12 M04B103/14

M04B111/00M16

US: 106/310 106/310S 106/639



Family:

Publication number	Publication date	Application number	Application date
AU2006224732 AA	20060921	AU20060224732	20060316
AU2006224732 BB	20111027	AU20060224732	20060316
EP1866262 A1	20071219	EP20060723481	20060316
JP2008532909 T2	20080821	JP20080501232T	20060316
JP2012121804 A2	20120628	JP20120034848	20120221
JP5037485 B2	20120926	JP20080501232T	20060316
US2009120329 AA	20090514	US20060886328	20060316
WO06097316 A1	20060921	WO2006EP02437	20060316

Priority:

CH20050000477 20050321 EP20050102071 20050316 EP20060723481 20060316
JP20080501232 20060316 WO2006EP02437 20060316

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): KURZ CHRISTOPHE ; LINDLAR BENEDIKT ; MAEDER URS ; SCHUERCH HEINZ ; SIKA TECHNOLOGY AG ; WOMBACHER FRANZ

Inventor(s): (std): BENEDIKT LINDLAR ; CHRISTOPHE KURZ ; FRANZ WOMBACHER ; HEINZ SCHURCH ; KURZ CHRISTOPHE ; LINDLAR BENEDIKT ; MADER URS ; MAEDER URS ; SCHUERCH HEINZ ; SCHURCH HEINZ ; URS MADER ; WOMBACHER FRANZ

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; OLIFF AND BERRIDGE PLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2006224732 AA	20060921	LSPB	+	published / reissued	
AU2006224732 AA	20120223	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2006224732 AA	20131010	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR	

EXPIRED						
AU2006224732 BB	20111027	LSGT	+	granted / extensions (spc, cpc, pte)		
EP1866262 A1	20071219	LSPB	+	published / reissued		
EP1866262 A1	20071219	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20071016	
EP1866262 A1	20080402	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20080228	
EP1866262 A1	20090107	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20080709	
JP2008532909 T2	20080821	LSPB	+	published / reissued		
JP2008532909 T2	20100908	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100907	
JP2008532909 T2	20110305	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110304	
JP2008532909 T2	20111026	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20111025	
JP2008532909 T2	20120222	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120221	
JP2008532909 T2	20120529	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN		
JP2008532909 T2	20120606	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120605	
JP2008532909 T2	20120607	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01	
JP2008532909 T2	20120712	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120704	
JP2008532909 T2	20120713	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150713 YEAR OF FEE PAYMENT : 3	
JP2008532909 T2	20120713	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150	
JP2012121804 A2	20120628	LSPB	+	published / reissued		
JP2012121804 A2	20140715	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20140714	
JP5037485 B2	20120926	LSGT	+	granted / extensions (spc, cpc, pte)		
JP5037485 B2	20100908	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100907	
JP5037485 B2	20110305	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20110304	
JP5037485 B2	20111026	LSES	-A131	NOTIFICATION	DESCRIPTION : JAPANESE	

				OF REASONS FOR REFUSAL	INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20111025
JP5037485 B2	20120222	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20120221
JP5037485 B2	20120529	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP5037485 B2	20120606	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120605
JP5037485 B2	20120607	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP5037485 B2	20120712	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120704
JP5037485 B2	20120713	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150713 YEAR OF FEE PAYMENT : 3
JP5037485 B2	20120713	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
US2009120329 AA	20090514	LSPB	+	published / reissued	
US2009120329 AA	20081204	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KURZ, CHRISTOPHE; SCHURCH, HEINZ; LINDLAR, BENEDIKT; AND OTHERS; REEL/FRAME:021928/0484; SIGNING DATES FROM 20081125 TO 20081126
US2009120329 AA	20130618	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
WO06097316 A1	20060921	LSPB	+	published / reissued	
WO06097316 A1	20070813	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006723481 COUNTRY OF REF DOCUMENT : EP
WO06097316 A1	20070914	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008501232 COUNTRY OF REF DOCUMENT : JP
WO06097316 A1	20070918	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06097316 A1	20071016	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : RU
WO06097316 A1	20071016	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2006224732 COUNTRY OF REF DOCUMENT : AU
WO06097316 A1	20071016	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RU

WO06097316 A1	20071108	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2006224732 COUNTRY OF REF DOCUMENT : AU
WO06097316 A1	20071219	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2006723481 COUNTRY OF REF DOCUMENT : EP
WO06097316 A1	20081204	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 11886328 COUNTRY OF REF DOCUMENT : US

Title: HARDENING AND HARDENING ACCELERATOR SUSPENSION USED IN A GUNNED CONCRETE MIXTURE COMPRISES ALUMINUM SULFATE, AMORPHOUS ALUMINUM HYDROXIDE, CARBOXYLIC ACID AND/OR THEIR SALTS AND SEPIOLITE AS STABILIZER

Abstract: Hardening and hardening accelerator suspension comprises aluminum sulfate, amorphous aluminum hydroxide, carboxylic acid and/or their salts and sepiolite as stabilizer. The suspension contains (in weight percent) 12-25 aluminum oxide, 15-31 sulfate, 2-30 carboxylic acid and/or their salts and 0.4-1.5 sepiolite.

Classifications:

International (IPC 8-9): C04B22/06 C04B22/14 C04B24/04 C04B40/00 (Advanced/Invention); C04B22/00 C04B24/00 C04B40/00 (Core/Invention)

CPC: C04B28/02 C04B40/0039 C04B2103/12 C04B2103/14 C04B2111/00146 C04B2111/00215

European: C04B28/02 C04B40/00D4 M04B103/12 M04B103/14 M04B111/00M16 M04B111/00M25

Family:

Publication number	Publication date	Application number	Application date
DE102005054190 B3	20071004	DE200510054190	20051114

Priority:

DE200510054190 20051114

Probable Assignee: ROMBOLD AND GFROEHRER GMBH AND CO

Assignee(s): (std): ROMBOLD AND GFROEHRER GMBH AND CO

Assignee(s): ROMBOLD AND GFROEHRER GMBH AND CO KG

Inventor(s): (std): MUELLER BURKHARD

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE102005054190 B3	20071004	LSGT	+	granted / extensions (spc, cpc, pte)	
DE102005054190 B3	20080403	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	

Title: SILICIC ACID-CONTAINING SOLIDIFICATION AND SETTING ACCELERATOR FOR HYDRAULIC BINDERS, AND METHOD FOR THE PRODUCTION THEREOF

Abstract: The invention relates to a solidification and setting accelerator for hydraulic binders, comprising sulfate, aluminum, organic acid and/or inorganic acid, and silicic acid, especially for use in sprayed concrete or sprayed mortar.

Classifications:

International (IPC 8-9): C04B14/06 C04B14/30 C04B18/14 C04B22/00 C04B22/06 C04B22/12 C04B22/14 C04B22/16

C04B24/04 C04B24/12 C04B28/02 C04B40/00 (Advanced/Invention);

C04B103/12 C04B103/14 C04B111/00 (Advanced/Non-invention);

C04B14/02 C04B18/04 C04B22/00 C04B24/00 C04B28/00 C04B40/00 (Core/Invention)

CPC: Y02W30/94 C04B40/0039 C04B28/02 C04B2103/12 C04B2103/14 C04B2111/00155 C04B2111/00206

European: C04B28/02 C04B40/00D4 M04B103/12 M04B103/14 M04B111/00M16B M04B111/00M23

Family:

Publication number	Publication date	Application number	Application date
EP1964825 A1	20080903	EP20070102297	20070213
WO08098962 A2	20080821	WO2008EP51743	20080213
WO08098962 A3	20081002	WO2008EP51743	20080213

Priority:

EP20070102297 20070213

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): FLATT ROBERT ; LINDLAR BENEDIKT ; LOOTENS DIDIER ; SCHUERCH HEINZ ; SIKA TECHNOLOGY AG ; WOMBACHER FRANZ

Inventor(s): (std): FLATT ROBERT ; LINDLAR BENEDIKT ; LOOTENS DIDIER ; SCHUERCH HEINZ ; WOMBACHER FRANZ

Agent(s): SIKA PATENT ATTORNEYS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP1964825 A1	20080903	LSPB	+	published / reissued	
EP1964825 A1	20090415	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090303
EP1964825 A1	20090506	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
EP1964825 A1	20090513	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090415
EP1964825 A1	20100224	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20090826
WO08098962 A2	20080821	LSPB	+	published / reissued	
WO08098962 A3	20090814	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: SPRAYABLE HYDRAULIC BINDER COMPOSITION AND METHOD OF USE

Abstract: Source: US2012196046A Process for the preparation of a sprayable hydraulic binder composition containing as main components water, aggregates, hydraulic binder, set accelerator, characterized in, that a calcium silicate hydrate (C-S-H) containing component is added before and/or at the spray nozzle.

Classifications:

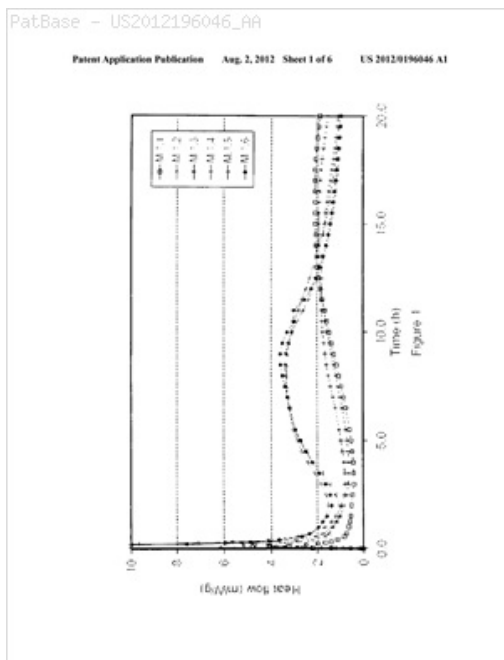
International (IPC 8-9): B05D1/02 C04B18/06 C04B18/08 C04B18/14 C04B20/00 C04B22/00 C04B22/06 C04B22/08 C04B22/14 C04B24/32 C04B28/00 C04B28/02 C04B28/04 C04B28/08 C04B28/10 C04B28/12 C04B28/14 C04B28/18 C04B28/22 C04B41/45 C04B41/50 C04B7/02 (Advanced/Invention); C04B111/00 (Advanced/Non-invention); C04B28/04 (Core/Invention); C04B7/02 (Core/Non-invention); C04B (Subclass/Invention)

International (IPC 1-7): C04B28/04

CPC: C04B28/04 C04B22/0086 C04B28/02 C04B28/021 C04B28/08 C04B28/10 C04B28/12 C04B28/14 C04B28/188 C04B41/4543 C04B41/5076 C04B2111/00155 C04B14/043 C04B14/06 C04B14/068 C04B22/064 C04B22/143 C04B24/023 C04B40/0028 C04B2103/12 C04B2103/32

European: C04B28/02 C04B28/02A C04B28/04 C04B28/08 C04B28/10 C04B28/12 C04B28/14 C04B28/18C2 C04B28/22 C04B41/45B16S C04B41/50T M04B111/00M16B

US: 1/1 106/638 106/638S 106/705 106/705S 106/710 106/710S 106/739 106/739S 106/772 106/772S 106/789 106/789S 106/791 106/791S 106/792 106/792S 427/427 427/427P

**Family:**

Publication number	Publication date	Application number	Application date
AR078261 AA	20111026	AR2010P103228	20100902
AU2010291308 AA	20110310	AU20100291308	20100831
AU2010291308 BB	20140814	AU20100291308	20100831
CA2771256 AA	20110310	CA20102771256	20100831
CA2771256 C	20170228	CA20102771256	20100831
CL2012000258 A1	20120706	CL20120000258	20120131
CN102482153 A	20120530	CN201080039221	20100831
CN105367025 A	20160302	CN201510891588	20100831
CO6491094 A2	20120731	CO20120012765	20120127
EP2473461 A2	20120711	EP20100747228	20100831
IN02810CN2012 A	20130510	IN2012CN02810	20120327
JP2013503805 T2	20130204	JP20120527297T	20100831
JP2015129092 A2	20150716	JP20150079580	20150408
JP6057712 B2	20170111	JP20120527297T	20100831
MX2012002715 A1	20120419	MX20120002715	20100831
NZ598647 A	20130531	NZ20100598647	20100831
PE14152012 A1	20121117	PE20120000259	20100831
SG178023 A1	20120329	SG20120002184	20100831
TH126466 A	20130822	TH20121000835	20100831
TW201124360 A	20110716	TW20100129714	20100902
US2012196046 AA	20120802	US20100390833	20100831
US9102568 BB	20150811	US20100390833	20100831
WO11026825 A2	20110310	WO2010EP62671	20100831
WO11026825 A3	20110505	WO2010EP62671	20100831
ZA201202295 A	20130626	ZA20120002295	20120329

Priority:

CN201080039221	20100831	EP20090169299	20090902	EP20100747228	20100831
JP20120527297	20100831	JP20150079580	20150408	JP20120527297T	20100831
WO2010EP62671	20100831				

Probable Assignee: CONSTR RES AND TECH GMBH

Assignee(s): (std): ALFONSO MONTERRAT ; CONSTR RES AND TECH GMBH ; CONSTRUCTION RES AND TECH GMBH ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH ; NICOLEAU LUC ; KOLOMIETS ELENA ; RES AND AMP TECHNOLOGY GMBH CONST

Inventor(s): (std): ALFONSO MONTERRAT ; ELENA KOLOMIETS ; KOLOMIETS ELENA ; KOLOMIETS ELENA ; LUC NICOLEAU ; MONTERRAT ALFONSO ; NICOLAU LUC ; NICOLEAU LUC ; DR NICOLEAU LUC ; DR ALFONSO MONTERRAT

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; CLARKE MODET; SILVANA MARIA LOPEZ DIAZ; SALVATORE A; JOSEPH G; CURATOLO SIDOTI CO LPA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
AR078261 AA	20111026	LSPB	+	published / reissued	
AU2010291308 AA	20110310	LSPB	+	published / reissued	
AU2010291308 AA	20141211	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2010291308 BB	20140814	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2771256 AA	20110310	LSPB	+	published / reissued	
CA2771256 AA	20150731	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20150720
CA2771256 C	20170228	LSGT	+	granted / extensions (spc, cpc, pte)	
CL2012000258 A1	20120706	LSPB	+	published / reissued	
CN102482153 A	20120530	LSPB	+	published / reissued	
CN102482153 A	20160525	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CN105367025 A	20160302	LSPB	+	published / reissued	
CN105367025 A	20160302	LSPB	+C06	PUBLICATION	
CO6491094 A2	20120731	LSPB	+	published / reissued	
CO6491094 A2	20140128	LSGT	+FG	APPLICATION GRANTED	
EP2473461 A2	20120711	LSPB	+	published / reissued	
EP2473461 A2	20120711	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120402
EP2473461 A2	20170419	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20170317
IN02810CN2012 A	20130510	LSPB	+	published / reissued	
JP2013503805 T2	20130204	LSPB	+	published / reissued	
JP2013503805 T2	20130829	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20130828
JP2013503805 T2	20140318	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20140317
JP2013503805 T2	20140917	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20140916
JP2013503805 T2	20140917	LSRE	A524	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)	TEXT : JAPANESE INTERMEDIATE CODE: A524 EFFECTIVE DATE : 20140916
JP2013503805 T2	20150120	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20150119
JP2013503805 T2	20160906	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160906
JP2013503805 T2	20161215	LSFE	+A61	FIRST PAYMENT	TEXT : JAPANESE INTERMEDIATE

				OF ANNUAL FEES (DURING GRANT PROCEDURE)	CODE: A61 EFFECTIVE DATE : 20161206
JP2013503805 T2	20161216	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	TEXT : JAPANESE INTERMEDIATE CODE: R150 REF DOCUMENT NUMBER : 6057712 COUNTRY OF REF DOCUMENT : JP
JP2015129092 A2	20150716	LSPB	+	published / reissued	
JP2015129092 A2	20150507	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20150507
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JP2015129092 A2	20151201	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20151130
JP2015129092 A2	20160527	LSRE	A521	WRITTEN AMENDMENT	TEXT : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20160527
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JP2015129092 A2	20170417	LSRV	-A02	DECISION OF REFUSAL	TEXT : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20170417
JP6057712 B2	20170111	LSGT	+	granted / extensions (spc, cpc, pte)	
MX2012002715 A1	20120419	LSPB	+	published / reissued	
MX2012002715 A1	20130809	LSLI	GD	LICENCE GRANTED	
MX2012002715 A1	20161006	LSGT	+FG	GRANT OR REGISTRATION	
NZ598647 A	20130531	LSPB	+	published / reissued	
NZ598647 A	20130927	LSGT	+PSEA	PATENT SEALED	
NZ598647 A	20140829	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	DESCRIPTION : PATENT RENEWED FOR 3 YEARS UNTIL 31 AUG 2017 BY JAMES + WELLS EFFECTIVE DATE : 20140825
PE14152012 A1	20121117	LSPB	+	published / reissued	
PE14152012 A1	20160418	LSWD	-FD	APPLICATION DECLARED VOID OR LAPSED	
SG178023 A1	20120329	LSPB	+	published / reissued	
TH126466 A	20130822	LSPB	+	published / reissued	
TW201124360 A	20110716	LSPB	+	published / reissued	
US2012196046 AA	20120802	LSPB	+	published / reissued	
US2012196046 AA	20120405	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: NICOLEAU, LUC; ALFONSO, MONTSERRAT; KOLOMIETS, ELENA; SIGNING DATES FROM 20120225 TO 20120322; REEL/FRA: 027997/0102
US9102568 BB	20150811	LSGT	+	granted / extensions (spc, cpc, pte)	
US9102568 BB	20150722	LSGT	PAT1	Patented Case	
WO11026825 A2	20110310	LSPB	+	published / reissued	

WO11026825 A2	20120302	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012527297 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
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WO11026825 A3	20120302	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012527297 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
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WO11026825 A3	20120302	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1201000835 COUNTRY OF REF DOCUMENT : TH
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WO11026825 A3	20120405	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13390833 COUNTRY OF REF DOCUMENT : US
ZA201202295 A	20130626	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: REVERTING COLORED CONCRETE AND RINSE WATER TO GRAY

Abstract: Source: US2011067602A A simple and easily useable system for reverting an uncured colored concrete material back to a gray color, by merely determining the original pigment and loading initially used to color the concrete material. The system utilizes a collection of pigment mixtures that can be selected and combined as needed to revert virtually any colored concrete back to a gray color, thus eliminating or reducing the expulsion of non-gray or colored concrete and/or dirty rinse water. Additionally, the volume of rinse water needed to clean out gray concrete is significantly less than that needed to clean out colored concrete.

Classifications:

International (IPC 8-9): B28C5/00 C04B14/00 C04B14/28
C04B14/30 C04B14/36 C04B16/00 C04B22/00

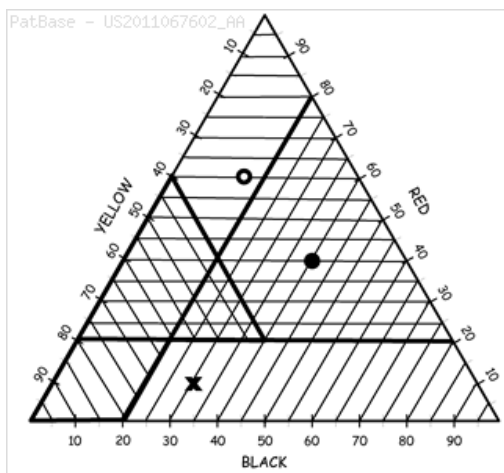
C04B40/00 (Advanced/Invention);

C04B111/00 C04B111/80 (Advanced/Non-invention)

CPC: C04B22/00 C04B14/308 C04B2103/54 C04B28/04 C04B14/28
C04B14/305 C04B40/0039 C04B2111/0075 C04B2111/80

European: C04B40/00D4 M04B111/00T26 M04B111/80

US: 106/436 106/436S 106/447 106/447S 106/456 106/456S
106/460 106/460S 106/464 106/464S 106/712 106/741 366/1
366/1S 700/265



Family:

Publication number	Publication date	Application number	Application date
US2011067602 AA	20110324	US20100764285	20100421
US2013139730 AA	20130606	US20130758360	20130204
US8882908 BB	20141111	US20130758360	20130204
WO11037915 A1	20110331	WO2010US49644	20100921

Priority:

US20090245343P 20090924 US20100764285 20100421 US20130758360 20130204

Probable Assignee: MIX MFG INC

Assignee(s): (std): FENELON TERRANCE P ; MIX MFG INC

Assignee(s): MIX MANUFACTURING INC

Inventor(s): (std): FENELON TERRANCE P

Agent(s): HOLZERIPLAW PC; DEBOE MARA E ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU
CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL
IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW
MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV
SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2011067602 AA	20110324	LSPB	+	published / reissued	
US2011067602 AA	20131103	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2013139730 AA	20130606	LSPB	+	published / reissued	
US8882908 BB	20141111	LSGT	+	granted / extensions (spc, cpc, pte)	
US8882908 BB	20141022	LSGT	PAT1	Patented Case	
WO11037915 A1	20110331	LSPB	+	published / reissued	
WO11037915 A1	20120326	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11037915 A1	20121017	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10819328 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: RAPID HYDRAULIC BINDER FOR CONCRETE PARTS AND STRUCTURES

Abstract: Source: US2013035423A A rapid hydraulic binder includes cement; a setting and hardening accelerator including hydrated calcium silicate seeds, a first superplasticizer and a second superplasticizer different from the first superplasticizer and having a maximum fluidizing action at 20 degrees centigrade after the maximum fluidizing action at 20 degrees centigrade of the first superplasticizer.

Classifications:

International (IPC 8-9): C04B103/10 C04B22/00 C04B22/08 C04B24/00 C04B24/26 C04B28/02 C04B28/04 C08K3/00 C08K3/20 C08K3/34 C08L33/04 C08L33/20 C08L33/24 C08L33/26 (Advanced/Invention); C04B103/10 (Advanced/Non-invention)

CPC: C04B28/04 C04B22/0086 C04B22/085 C04B2103/14 C04B2111/1006

European: C04B22/00N C04B22/08B C04B28/04 M04B103/14 M04B111/10A

US: 524/2 524/456 524/5

Family:

Publication number	Publication date	Application number	Application date
CA2796176 AA	20111027	CA20112796176	20110419
EP2560929 A1	20130227	EP20110731429	20110419
FR2958931 A1	20111021	FR20100052992	20100420
FR2958931 B1	20120518	FR20100052992	20100420
US2013035423 AA	20130207	US20110642263	20110419
WO11131904 A1	20111027	WO2011FR50902	20110419

Priority:

FR20100052992 20100420 WO2011FR50902 20110419

Probable Assignee: LAFARGE

Assignee(s): (std): LAFARGE SA ; LARFARGE ; PARDAL XIAOLIN ; SABIO SERGE ; CHAUMILLIAT CHRISTINE

Assignee(s): LAFARGE

Inventor(s): (std): PARDAL XIAOLIN ; SABIO SERGE ; CHAUMILLIAT CHRISTINE

Inventor(s): CHRISTINE CHAUMILLIAT ; SERGE SABIO ; XIAOLIN PARDAL

Agent(s): NORTON ROSE CANADA SENCRL SRL LLP; Berruet Laure; LAFARGE; MERIGEALT SHONA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2796176 AA	20111027	LSPB	+	published / reissued	
CA2796176 AA	20160613	LSSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20160314
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EP2560929 A1	20130227	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20121120
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FR2958931 A1	20150319	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 6
FR2958931 A1	20160418	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 7
FR2958931 A1	20170407	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
FR2958931 B1	20120518	LSGT	+	granted / extensions (spc, cpc, pte)	
US2013035423 AA	20130207	LSPB	+	published / reissued	
US2013035423 AA	20121025	LSAS	AS	ASSIGNMENT	OWNER NAME : LAFARGE, FRANCE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SABIO, SERGE; PARDAL, XIAOLIN; CHAUMILLIAT, CHRISTINE; REEL/FRAME:029191/0241 EFFECTIVE DATE : 20121015
US2013035423 AA	20170501	LSWD	-ABD1	Abandoned -- After Examiner's Answer or Board of Appeals	

Decision					
WO11131904 A1	20111027	LSPB	+	published / reissued	
WO11131904 A1	20121011	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2796176 COUNTRY OF REF DOCUMENT : CA
WO11131904 A1	20121022	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11131904 A1	20121025	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13642263 COUNTRY OF REF DOCUMENT : US

Title: ACCELERATOR COMPOSITION

Abstract: Source: US2012270969A Compositions containing calcium silicate hydrate and at least one (co)polymer having carboxylic acid groups and/or carboxylate groups and sulphonic acid groups and/or sulphonate groups, wherein the molar ratio of the number of carboxylic acid groups and/or carboxylate groups to the sulphonic acid groups and/or sulphonate groups is from 1/20 to 20/1. Processes for producing the aqueous and also solid compositions, their use as curing accelerators in building material mixtures containing cement, slag sand, fly ash, silica dust, metakaolin, natural pozzuolanas, calcined oil shales and/or calcium aluminate cement and their use as grinding aid in the production of cement.

Classifications:

International (IPC 8-9): C04B16/04 C08L33/26 (Advanced/Invention)

CPC: C08F220/06 C08F220/58 C08L33/02 C08L33/26 C04B40/0039 C04B28/04 C04B28/06 C04B28/14 C04B2103/12 C04B2103/14 Y02W30/92 Y02W30/94

European: C04B28/04 C04B28/06 C04B28/14 C04B40/00D4 M04B103/12 M04B103/14

US: 524/5 524/547

PatBase - US2012270969_AA

Patent Application Publication Oct. 25, 2012 US 2012/0270969 A1

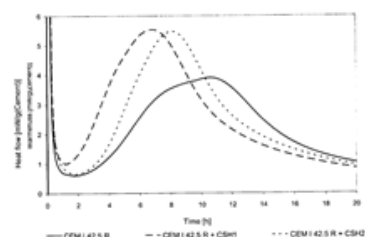


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
US2012270969 AA	20121025	US20120451024	20120419

Priority:

US20110477755P 20110421 US20120451024 20120419

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): BICHLER MANFRED ; HESSE CHRISTOPH

Assignee(s): CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Inventor(s): (std): HESSE CHRISTOPH ; BICHLER MANFRED

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2012270969 AA	20121025	LSPB	+	published / reissued	
US2012270969 AA	20120521	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BICHLER, MANFRED; HESSE, CHRISTOPH; REEL/FRAME:028240/0575 EFFECTIVE DATE : 20120503
US2012270969 AA	20160729	LSAL	NAF1	Notice of Appeal Filed	

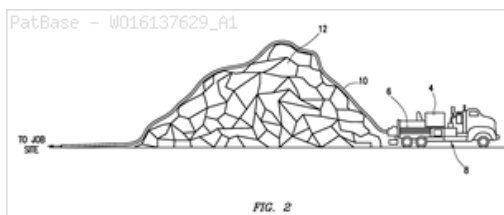
Title: SET-DELAYED CEMENT COMPOSITIONS COMPRISING PUMICE AND ASSOCIATED METHODS

Abstract: Source: US2013233550A A variety of methods and compositions are disclosed, including, in one embodiment, a method of cementing in a subterranean formation, comprising: providing a set-delayed cement composition comprising water, pumice, hydrated lime, and a set retarder; activating the set-delayed cement composition; introducing the set-delayed cement composition into a subterranean formation; and allowing the set-delayed cement composition to set in the subterranean formation.

Classifications:

International (IPC 8-9): B28B13/02 C04B14/00 C04B14/02 C04B14/04 C04B14/06 C04B14/16 C04B14/36 C04B14/38 C04B16/00 C04B16/06 C04B22/08 C04B22/12 C04B22/14 C04B22/16 C04B24/00 C04B24/04 C04B24/16 C04B24/24 C04B24/28 C04B28/02 C04B28/04 C04B28/10 C04B28/12 C04B28/18 C04B28/20 C04B28/22 C04B38/00 C04B38/10 C04B40/00 C04B40/06 C04B41/00 C04B41/45 C04B7/34 C09K8/03 C09K8/40 C09K8/42 C09K8/46 C09K8/467 C09K8/473 C09K8/487 C09K8/504 C09K8/506 C9K8/42 E04B1/16 E21B21/00 E21B21/01 E21B33/12 E21B33/13 E21B33/138 E21B33/14 (Advanced/Invention); C04B103/22 C09K8/467 (Advanced/Non-invention); C04B28/02 (Core/Invention)

CPC: E21B21/01 C04B2103/10 C04B2103/20 C04B2111/00008 E21B21/062 B28B13/02 C04B41/0018 C04B28/04 C04B28/08 C04B28/14 C04B28/34 C04B28/06 C09K8/03 C04B24/003 E21B21/003 C04B20/10 C09K8/40 C04B40/065 E04B1/16 C04B2103/12 C04B2103/22 C04B2103/408 C04B22/16 C04B24/006 C04B24/163 C04B24/18 C04B24/22 C04B24/2641 C04B24/383 C04B40/0039 C09K8/506 C09K8/5045 C04B22/147 C04B20/023 C04B14/106 C04B18/08 C04B18/146 C04B22/0013 C04B22/06 C04B24/12 C04B24/223 C04B12/04 C04B22/064 C04B22/124 C04B24/122 Y02W30/92 Y02W30/95 C04B14/06 C09K2208/10 C04B2111/1037 C04B7/34 C04B14/062 C09K8/428 C04B14/047 C04B14/08 C04B18/141 C04B18/162 C09K8/032 C04B16/00 C04B14/00 C04B22/082 C04B40/00 C04B2111/00086 C04B38/10 C04B38/0067 C04B2111/00146 E21B33/14 C09K2208/08 C04B2111/00603 C04B2111/74 C04B2111/00129 C04B2111/00431 C04B2111/60 C04B2111/00732 C04B2111/00767 C04B2111/00775 Y02W30/94 C04B28/182 C04B28/184 C04B28/186 C04B28/188 C04B28/02 C09K8/426 E21B47/0005 E21B47/124 C09K8/42 C04B28/10 C04B2103/30 C04B22/062 C04B22/148 C04B24/04 C04B24/226 C04B24/2647 C04B40/0658 C09K8/473 Y02W30/97 Y02W30/91 C04B14/02 E21B33/13 C04B14/16 C04B14/04 C04B24/121 C04B14/386 C04B24/28 C09K8/487 C09K8/46 E21B33/138 C04B28/18 C09K8/467 C04B28/22 C04B2103/46
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**Family:**

Publication number	Publication date	Application number	Application date
AR097586 AA	20160323	AR2014P103347	20140908
AU2013230962 AA	20130912	AU20130230962	20130307
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AU2014248364 AA	201411009	AU20140248364	20140328
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WO13134456 A1	20130912	WO2013US29489	20130307
WO14165399 A1	20141009	WO2014US32150	20140328
WO15035227 A1	20150312	WO2014US54380	20140905
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WO15035281 A1	20150312	WO2014US54497	20140908
WO15035386 A1	20150312	WO2014US54791	20140909
WO15035388 A1	20150312	WO2014US54794	20140909
WO15035392 A1	20150312	WO2014US54799	20140909
WO15081014 A1	20150604	WO2014US67112	20141124
WO15085177 A1	20150611	WO2014US68804	20141205
WO15130815 A1	20150903	WO2015US17564	20150225
WO15138453 A1	20150917	WO2015US19709	20150310
WO15143374 A1	20150924	WO2015US21837	20150320
WO16137623 A1	20160901	WO2016US14690	20160125
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Priority:

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US20160362397	20161128	US20170415558	20170125		

Probable Assignee: HALLIBURTON ENERGY SERVICES INC

Assignee(s): (std): BOUL PETER J ; HALLIBURTON ENERGY SERVICES INC ; BROTHERS LANCE E ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; PISKLAK THOMAS J ; OTIENO PAULINE A ; MORGAN RONNIE G ; KHALLIBERTON ENERDZHI SERVICEZ INK ; AGAPIOU KYRIACOS

Assignee(s): BALLEW HORTON COLBY ; ADAMS BAYA ; IVERSON BENJAMIN J ; LIMAN SUJONO ; PISKLAK THOMAS JASON ; HALLIBURTON ENERGY SERVICES INC10200 BELLAIRE BOULEVARDHOUSTONTX77072US ; HALLIBURTON ENERGY SERVICES INC ; LEWIS SAMUEL J ; OTIENO PAULINE AKINYI ; HARRIS CODY GLENN ; MORGAN RONNIE GLEN ; MARTINEZ JUAN HUMBERTO ; KELLUM MATTHEW GRADY ; LEWIS SAMUEL JASON ; IVERSON BENJAMIN JOHN ; BOUL PETER JAMES ; BROTHERS LANCE EVERETT ; GOEL VIVEK S ; HALLIBURTON ENERGY SERVICE INC

Inventor(s): (std): ADAMS BAYA ; AGAPIOU KYRIACOS ; BALLEW HORTON COLBY ; BENJAMIN IVERSON ; BENJAMIN JOHN IVERSON ; BOUL PETER J ; BOUL PETER JAMES ; BROTHERS LANCE E ; BROTHERS LANCE EVERETT ; BROZERS LANS E ; GOEL VIVEK S ; HARRIS CODY GLENN ; HORTON COLBY BALLEW ; IVERSON BENJAMIN J ; IVERSON BENJAMIN JOHN ; JUAN HUMBERTO MARTINEZ ; KELLUM MATTHEW GRADY ; LEWIS SAMUEL J ; LEWIS SAMUEL JASON ; MARTINEZ JUAN HUMBERTO ; MATTHEW GRADY KELLUM ; OTIENO PAULINE A ; OTIENO PAULINE AKINYI ; PISKLAK THOMAS ; PISKLAK THOMAS J ; PISKLAK THOMAS JASON ; VIVEK S GOEL ; THOMAS JASON PISKLAK ; SAMUEL J LEWIS ; PETER JAMES BOUL ; LANCE EVERETT BROTHERS ; KYRIACOS AGAPIOU ; BENJAMIN J IVERSON ; SAMUEL JASON LEWIS ; RONNIE GLEN MORGAN ; MORGAN RONNIE G ; MORGAN RONNIE GLEN ; PISKLAK TOMAS DZH ; MATTHEW G KELLUM ; CODY GLENN HARRIS ; BAYA ADAMS ; AGAPIOU KYRACOS ; PAULINE AKINYI OTIENO

Inventor(s): PAULINE A OTIENO ; THOMAS J PISKLAK ; OTIENO PAULINE ; RONNIE G MORGAN ; PETER J BOUL ; PISKLAK THOMAS JUS ; MORGAN RONNIE ; LANCE E BROTHERS ; BROTHERS LANCE EUS ; BROTHERS LANCE ; BOUL PETER

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; PHILLIPS ORMONDE FITZPATRICK; FB RICE; PARLEE MCLAWS LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; COTTRILL EMILY ELIZABETH HELEN; ARIFIA JAUHARIA FAJRA ST SH;

YAMASAKI KAZUO; NISHIJIMA TAKAKI; HAKODA ATSUSHI; HATTORI HIRONOBU; ICHIKAWA SATSUKI;
ASAI KENJI; DESHIMARU TAKESHI; CRAIG W; TUMEY LLP; TURNEY LLP; TUMEY COREY S; COREY
TUMEY S; TUMEY COREY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR
CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID
IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN
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Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR097586 AA	20160323	LSPB	+	published / reissued	
AU2013230962 AA	20130912	LSPB	+	published / reissued	
AU2013230962 AA	20151105	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
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AU2014317858 BB	20170202	LSGT	+	granted / extensions (spc, cpc, pte)	
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AU2015230993 AA	20150924	LSPB	+	published / reissued	
AU2015230993 BB	20170323	LSGT	+	granted / extensions (spc, cpc, pte)	
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AU2016231651 AA	20161020	LSPB	+	published / reissued	
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CN105934558 A	20160907	LSPB	+	published / reissued		
CN105934558 A	20160907	LSPB	+C06	PUBLICATION		
EP2822914 A1	20150114	LSPB	+	published / reissued		
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EP2981511 A1	20161123	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 28/10 20060101ALI20161019BHEP	
EP2981511 A1	20161123	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C09K 8/473 20060101ALI20161019BHEP	
EP2981511 A1	20161123	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 28/18 20060101ALI20161019BHEP	

EP2981511 A1	20161123	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C09K 8/46 20060101ALI20161019BHEP
GB2532383 A1	20160518	LSPB	+	published / reissued	
GB2534036 A1	20160713	LSPB	+	published / reissued	
GB2535332 A1	20160817	LSPB	+	published / reissued	
GB2535332 B2	20170426	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2535857 A1	20160831	LSPB	+	published / reissued	
GB2535880 A1	20160831	LSPB	+	published / reissued	
GB2535881 A1	20160831	LSPB	+	published / reissued	
GB2536368 A1	20160914	LSPB	+	published / reissued	
GB2537493 A1	20161019	LSPB	+	published / reissued	
GB2537518 A1	20161019	LSPB	+	published / reissued	
GB2537548 A1	20161019	LSPB	+	published / reissued	
GB2538396 A1	20161116	LSPB	+	published / reissued	
ID201601558 A	20160318	LSPB	+	published / reissued	
ID201700149 A	20170113	LSPB	+	published / reissued	
IN05399DN2015 A	20160115	LSPB	+	published / reissued	
IN07024DN2014 A	20150410	LSPB	+	published / reissued	
JP2017508028 T2	20170323	LSPB	+	published / reissued	
JP2017510669 T2	20170413	LSPB	+	published / reissued	
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MX2015011240 A1	20160303	LSPB	+	published / reissued	
MX2016001053 A1	20160908	LSPB	+	published / reissued	
MX2016001651 A1	20161107	LSPB	+	published / reissued	
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MX2016002867 A1	20160817	LSPB	+	published / reissued	
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MX2016010357 A1	20161111	LSPB	+	published / reissued	
MX2016010632 A1	20161115	LSPB	+	published / reissued	
NO20160085 A	20160115	LSPB	+	published / reissued	
NO20160086 A	20160115	LSPB	+	published / reissued	
NO20160243 A	20160212	LSPB	+	published /	

NO20160245 A	20160212	LSPB	+	reissued published / reissued	
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NO20160535 A	20160405	LSPB	+	published / reissued	
NO20160830 A	20160518	LSPB	+	published / reissued	
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NO20161157 A	20160712	LSPB	+	published / reissued	
PL410494 A1	20151109	LSPB	+	published / reissued	
PL413825 A1	20160718	LSPB	+	published / reissued	
RU2014140788 A	20160427	LSPB	+	published / reissued	
RU2015128800 A	20170505	LSPB	+	published / reissued	
RU2586517 C2	20160610	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2618540 C1	20170504	LSGT	+	granted / extensions (spc, cpc, pte)	
SG11201602720W A	20160530	LSPB	+	published / reissued	
SG11201602947T A	20160530	LSPB	+	published / reissued	
TH151613 A	20160603	LSPB	+	published / reissued	
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US2013248183 AA	20130926	LSPB	+	published / reissued	
US2013248183 AA	20130404	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS J.; AGAPIOU, KYRIACOS; OTIENO, PAULINE A.; AND OTHERS; REEL/FRAME:030151/0401 EFFECTIVE DATE : 20130403
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US2014034313 AA	20140206	LSPB	+	published / reissued	
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US2014083701 AA	20131126	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOUL, PETER JAMES; PISKLAK, THOMAS JASON; LEWIS, SAMUEL J.; AND OTHERS; SIGNING DATES FROM 20131122 TO 20131126; REEL/FRAME:031681/0447
US2014090843 AA	20140403	LSPB	+	published / reissued	
US2014090843 AA	20131205	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOUL, PETER JAMES; AGAPIOU, KYRIACOS; PISKLAK, THOMAS JASON; AND OTHERS; SIGNING DATES FROM 20131127 TO 20131204; REEL/FRAME:031726/0246

US2014174741 AA	20140626	LSPB	+	published / reissued	
US2014174741 AA	20140228	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:AGAPIOU, KYRIACOS; MARTINEZ, JUAN HUMBERTO; PISKLAK, THOMAS JASON; AND OTHERS; REEL/FRAME:032328/0029 EFFECTIVE DATE : 20140221
US2014174741 AA	20140307	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:IVERSON, BENJAMIN JOHN; REEL/FRAME:032376/0831 EFFECTIVE DATE : 20140305
US2014190696 AA	20140710	LSPB	+	published / reissued	
US2014190696 AA	20140310	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:IVERSON, BENJAMIN JOHN; PISKLAK, THOMAS JASON; MORGAN, RONNIE GLEN; AND OTHERS; SIGNING DATES FROM 20140304 TO 20140307; REEL/FRAME:032396/0396
US2014202698 AA	20140724	LSPB	+	published / reissued	
US2014202698 AA	20140321	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS JASON; AGAPIOU, KYRIACOS; MARTINEZ, JUAN HUMBERTO; AND OTHERS; SIGNING DATES FROM 20140313 TO 20140320; REEL/FRAME:032494/0707
US2014216746 AA	20140807	LSPB	+	published / reissued	
US2014216746 AA	20131126	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BALLEW, HORTON COLBY; PISKLAK, THOMAS JASON; AGAPIOU, KYRIACOS; AND OTHERS; SIGNING DATES FROM 20131121 TO 20131126; REEL/FRAME:031681/0815
US2014373756 AA	20141225	LSPB	+	published / reissued	
US2014373756 AA	20140905	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BROTHERS, LANCE EVERETT; PISKLAK, THOMAS JASON; REEL/FRAME:033682/0052 EFFECTIVE DATE : 20120309
US2014374098 AA	20141225	LSPB	+	published / reissued	
US2014374098 AA	20140905	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BROTHERS, LANCE EVERETT; PISKLAK, THOMAS JASON; REEL/FRAME:033682/0041 EFFECTIVE DATE : 20120309
US2015175481 AA	20150625	LSPB	+	published / reissued	
US2015175481 AA	20150501	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS JASON; MORGAN, RONNIE GLEN; AGAPIOU, KYRIACOS; AND OTHERS; SIGNING DATES FROM 20150304 TO 20150430;

US2015175481 AA	20150612	LSAS	AS	ASSIGNMENT	REEL/FRAME:035550/0599 OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BROTHERS, LANCE EVERETT; REEL/FRAME:035831/0066 EFFECTIVE DATE : 20150519
US2015175481 AA	20170221	LSRV	-FRM1	Final Rejection Mailed	
US2015175869 AA	20150625	LSPB	+	published / reissued	
US2015175869 AA	20150319	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS JASON; MORGAN, RONNIE GLEN; AGAPIOU, KYRIACOS; AND OTHERS; SIGNING DATES FROM 20150304 TO 20150316; REEL/FRAME:035206/0462
US2015175869 AA	20150612	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BROTHERS, LANCE EVERETT; REEL/FRAME:035831/0056 EFFECTIVE DATE : 20150519
US2015175869 AA	20170418	LSRV	-FRM1	Final Rejection Mailed	
US2015197033 AA	20150716	LSPB	+	published / reissued	
US2015197033 AA	20150319	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS JASON; MORGAN, RONNIE GLEN; AGAPIOU, KYRIACOS; AND OTHERS; SIGNING DATES FROM 20150304 TO 20150316; REEL/FRAME:035203/0660
US2015197033 AA	20150612	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BROTHERS, LANCE EVERETT; REEL/FRAME:035831/0053 EFFECTIVE DATE : 20150519
US2015197033 AA	20170307	LSES	NFA1	Non Final Action Mailed	
US2015197453 AA	20150716	LSPB	+	published / reissued	
US2015197453 AA	20150428	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS JASON; MORGAN, RONNIE GLEN; AGAPIOU, KYRIACOS; AND OTHERS; SIGNING DATES FROM 20150304 TO 20150424; REEL/FRAME:035518/0547
US2015197453 AA	20150612	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:BROTHERS, LANCE EVERETT; REEL/FRAME:035831/0063 EFFECTIVE DATE : 20150519
US2015197453 AA	20170418	LSRV	-FRM1	Final Rejection Mailed	
US2016075933 AA	20160317	LSPB	+	published / reissued	
US2016075933 AA	20151228	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS J.; AGAPIOU, KYRIACOS; MORGAN,

					RONNIE G.; AND OTHERS; REEL/FRAME:037363/0332 EFFECTIVE DATE : 20130403
US2016075933 AA	20170322	LSES	NFA1	Non Final Action Mailed	
US2016214900 AA	20160728	LSPB	+	published / reissued	
US2016214900 AA	20160401	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS JASON; AGAPIOU, KYRIACOS; MARTINEZ, JUAN HUMBERTO; AND OTHERS; SIGNING DATES FROM 20140313 TO 20140320; REEL/FRAME:038176/0041
US2016214900 AA	20170413	LSES	NFA1	Non Final Action Mailed	
US2016222276 AA	20160804	LSPB	+	published / reissued	
US2016222276 AA	20170501	LSES	NFA1	Non Final Action Mailed	
US2016280982 AA	20160929	LSPB	+	published / reissued	
US2016280982 AA	20160526	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOUL, PETER JAMES; PISKLAK, THOMAS JASON; LEWIS, SAMUEL J.; AND OTHERS; SIGNING DATES FROM 20131122 TO 20131126; REEL/FRAME:038732/0336
US2016280982 AA	20170419	LSES	NFA1	Non Final Action Mailed	
US2017036959 AA	20170209	LSPB	+	published / reissued	
US2017036959 AA	20161024	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:IVERSON, BENJAMIN JOHN; PISKLAK, THOMAS JASON; MORGAN, RONNIE GLEN; AND OTHERS; SIGNING DATES FROM 20140304 TO 20140307; REEL/FRAME:040105/0854
US2017036959 AA	20170512	LSES	NFA1	Non Final Action Mailed	
US2017073273 AA	20170316	LSPB	+	published / reissued	
US2017073273 AA	20161128	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:AGAPIOU, KYRIACOS; MARTINEZ, JUAN HUMBERTO; PISKLAK, THOMAS JASON; AND OTHERS; SIGNING DATES FROM 20140221 TO 20140305; REEL/FRAME:040434/0848
US2017130119 AA	20170511	LSPB	+	published / reissued	
US2017130119 AA	20170125	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BOUL, PETER JAMES; AGAPIOU, KYRIACOS; PISKLAK, THOMAS JASON; AND OTHERS; SIGNING DATES FROM 20131127 TO 20131204; REEL/FRAME:041084/0125
US8851173 BB	20141007	LSGT	+	granted / extensions (spc, cpc, pte)	
US9212534 BB	20151215	LSGT	+	granted / extensions (spc, cpc, pte)	

US9212534 BB	20151124	LSGT	PAT1	Patented Case	
US9227872 BB	20160105	LSGT	+	granted / extensions (spc, cpc, pte)	
US9227872 BB	20151216	LSGT	PAT1	Patented Case	
US9255031 BB	20160209	LSGT	+	granted / extensions (spc, cpc, pte)	
US9255031 BB	20151118	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US9255454 BB	20160209	LSGT	+	granted / extensions (spc, cpc, pte)	
US9255454 BB	20151214	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US9260343 BB	20160216	LSGT	+	granted / extensions (spc, cpc, pte)	
US9260343 BB	20151005	LSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US9328281 BB	20160503	LSGT	+	granted / extensions (spc, cpc, pte)	
US9328281 BB	20160411	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
US9328583 BB	20160503	LSGT	+	granted / extensions (spc, cpc, pte)	
US9328583 BB	20150928	LSES	NFA1	Non Final Action Mailed	
US9371712 BB	20160621	LSGT	+	granted / extensions (spc, cpc, pte)	
US9371712 BB	20160601	LSGT	PAT1	Patented Case	
US9505972 BB	20161129	LSGT	+	granted / extensions (spc, cpc, pte)	
US9505972 BB	20161109	LSGT	PAT1	Patented Case	
US9534165 BB	20170103	LSGT	+	granted / extensions (spc, cpc, pte)	
US9534165 BB	20161214	LSGT	PAT1	Patented Case	
US9580638 BB	20170228	LSGT	+	granted / extensions (spc, cpc, pte)	
US9580638 BB	20170208	LSGT	PAT1	Patented Case	
WO13134456 A1	20130912	LSPB	+	published / reissued	
WO13134456 A1	20140905	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2866602 COUNTRY OF REF DOCUMENT : CA
WO13134456 A1	20140909	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO13134456 A1	20140909	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 410494 COUNTRY OF REF DOCUMENT : PL
WO13134456 A1	20140911	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2013230962 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20130307 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

WO13134456 A1	20141009	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014140788 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14165399 A1	20141009	LSPB	+	published / reissued	
WO14165399 A1	20150709	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014248364 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140328 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14165399 A1	20150826	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 413825 COUNTRY OF REF DOCUMENT : PL
WO14165399 A1	20150827	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2902889 COUNTRY OF REF DOCUMENT : CA
WO14165399 A1	20150930	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14165399 A1	20151102	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015128800 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15035227 A1	20150312	LSPB	+	published / reissued	
WO15035227 A1	20160212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 201602525 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESCRIPTION : PCT FILING DATE = 20140905
WO15035227 A1	20160212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2921422 COUNTRY OF REF DOCUMENT : CA
WO15035227 A1	20160303	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014317957 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140905 KIND CODE OF REF DOCUMENT : A
WO15035227 A1	20160307	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15035227 A1	20160406	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016105343 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO15035227 A1	20160928	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14842323 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO15035280 A1	20150312	LSPB	+	published / reissued	
WO15035280 A1	20160115	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 201600816 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESCRIPTION : PCT FILING DATE = 20140908
WO15035280 A1	20160204	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014317923 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140908 KIND CODE OF REF DOCUMENT : A
WO15035280 A1	20160208	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE	REF DOCUMENT NUMBER : 2920756

				IN:	COUNTRY OF REF DOCUMENT : CA
WO15035280 A1	20160208	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : P151/2016 COUNTRY OF REF DOCUMENT : AE
WO15035280 A1	20160309	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15035280 A1	20160411	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016103916 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO15035280 A1	20161005	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14841782 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO15035281 A1	20150312	LSPB	+	published / reissued	
WO15035281 A1	20160115	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 201600810 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESCRIPTION : PCT FILING DATE = 20140908
WO15035281 A1	20160201	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : P123/2016 COUNTRY OF REF DOCUMENT : AE
WO15035281 A1	20160204	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014317924 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140908 KIND CODE OF REF DOCUMENT : A
WO15035281 A1	20160208	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2920783 COUNTRY OF REF DOCUMENT : CA
WO15035281 A1	20160309	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15035281 A1	20160411	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016102673 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO15035281 A1	20161005	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14842531 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO15035386 A1	20150312	LSPB	+	published / reissued	
WO15035386 A1	20160212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2921425 COUNTRY OF REF DOCUMENT : CA
WO15035386 A1	20160212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 201602523 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESCRIPTION : PCT FILING DATE = 20140909
WO15035386 A1	20160303	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014317852 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140909 KIND CODE OF REF DOCUMENT : A
WO15035386 A1	20160309	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15035386 A1	20160411	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016105974 COUNTRY OF REF DOCUMENT :

					RU KIND CODE OF REF DOCUMENT : A
WO15035386 A1	20161005	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14841577 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO15035388 A1	20150312	LSPB	+	published / reissued	
WO15035388 A1	20160211	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2921230 COUNTRY OF REF DOCUMENT : CA
WO15035388 A1	20160212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 201602526 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESCRIPTION : PCT FILING DATE = 20140909
WO15035388 A1	20160303	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014317854 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140909 KIND CODE OF REF DOCUMENT : A
WO15035388 A1	20160309	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15035388 A1	20160411	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016105973 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO15035388 A1	20161005	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14842365 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
WO15035392 A1	20150312	LSPB	+	published / reissued	
WO15035392 A1	20160212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2921428 COUNTRY OF REF DOCUMENT : CA
WO15035392 A1	20160212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	TEXT : PCT FILING DATE = 20140909 REF DOCUMENT NUMBER : 201602528 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15035392 A1	20160212	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1602528 COUNTRY OF REF DOCUMENT : GB
WO15035392 A1	20160303	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014317858 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140909 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15035392 A1	20160309	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15035392 A1	20160411	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016105972 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15035392 A1	20161005	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14842542 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :
WO15081014 A1	20150604	LSPB	+	published / reissued	

WO15081014 A1	20160330	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	TEXT : PCT FILING DATE = 20141124 REF DOCUMENT NUMBER : 201605339 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15081014 A1	20160420	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2928206 COUNTRY OF REF DOCUMENT : CA
WO15081014 A1	20160421	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014354935 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20141124 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15081014 A1	20160527	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15081014 A1	20161221	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14866631 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :
WO15085177 A1	20150611	LSPB	+	published / reissued	
WO15085177 A1	20160329	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	TEXT : PCT FILING DATE = 20141205 REF DOCUMENT NUMBER : 201605238 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15085177 A1	20160420	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2928213 COUNTRY OF REF DOCUMENT : CA
WO15085177 A1	20160421	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014360333 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20141205 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15085177 A1	20160606	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15085177 A1	20161228	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14868602 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :
WO15130815 A1	20150903	LSPB	+	published / reissued	
WO15130815 A1	20160513	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	TEXT : PCT FILING DATE = 20150225 REF DOCUMENT NUMBER : 201608419 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15130815 A1	20160602	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015223141 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20150225 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15130815 A1	20160705	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2936003 COUNTRY OF REF DOCUMENT : CA
WO15130815 A1	20160727	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016548639 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

WO15130815 A1	20160829	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15130815 A1	20170322	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 15756037 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :
WO15138453 A1	20150917	LSPB	+	published / reissued	
WO15138453 A1	20160513	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	TEXT : PCT FILING DATE = 20150310 REF DOCUMENT NUMBER : 201608418 COUNTRY OF REF DOCUMENT : GB KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15138453 A1	20160602	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015229584 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20150310 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15138453 A1	20160610	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2933565 COUNTRY OF REF DOCUMENT : CA
WO15138453 A1	20160623	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016542688 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
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WO15143374 A1	20160921	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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WO16137623 A1	20160901	LSPB	+	published / reissued
WO16137626 A1	20160901	LSPB	+	published / reissued
WO16137628 A1	20160901	LSPB	+	published / reissued
WO16137629 A1	20160901	LSPB	+	published / reissued

Title: HARDENING ACCELERATOR COMPOSITION FOR CEMENTITIOUS COMPOSITIONS

Abstract: Source: US2015197448A The invention concerns a process for the for the preparation of a hardening accelerator composition by reaction of a water-soluble calcium compound with a water-soluble silicate compound, the reaction being carried out in the presence of an aqueous solution which contains a plasticizer suitable for hydraulic binders, characterized in that said reaction is being carried out in the presence of apatite and that the molar ratio of calcium to phosphor in the hardening accelerator is from 25/1 to 400/1.

Classifications:

International (IPC 8-9): C04B103/14 C04B22/00 C04B22/06 C04B22/08 C04B22/16 C04B24/18 C04B24/22 C04B24/26

C04B24/32 C04B28/02 C04B40/00 (Advanced/Invention);

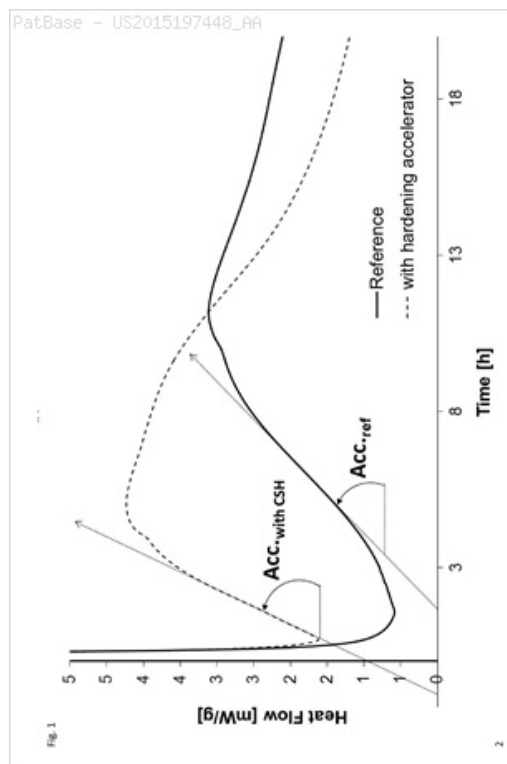
C04B103/14 (Advanced/Non-invention)

CPC: C04B24/2694 C04B24/18 C04B24/226 C04B22/064

C04B22/0086 C04B40/0039 C04B2103/14 C04B14/043 C04B14/366

C04B24/243 C04B24/223 C04B24/2641 C04B24/2647

US: 524/160 524/5 524/76

**Family:**

Publication number	Publication date	Application number	Application date
AU2013304179 AA	20140220	AU20130304179	20130812
AU2013304179 BB	20160616	AU20130304179	20130812
CA2881217 AA	20150206	CA20132881217	20130812
CN104684862 A	20150603	CN201380051607	20130812
DE602013015361 D1	20170119	DE201360015361T	20130812
EP2882695 A1	20150617	EP20130748018	20130812
EP2882695 B1	20161214	EP20130748018	20130812
IN01384CN2015 A	20160701	IN2015CN01384	20150309
JP2015528793 T2	20151001	JP20150526953T	20130812
MX2015001957 A1	20150604	MX20150001957	20130812
RU2015108660 A	20160927	RU20150108660	20130812
TR201703887 T4	20170421	TR20170003887T	20130812
US2015197448 AA	20150716	US20130420417	20130812
US9650298 BB	20170516	US20130420417	20130812
WO14026940 A1	20140220	WO2013EP66778	20130812

Priority:

EP20120180205 20120813 EP20130748018 20130812 WO2013EP66778 20130812

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): BASF SCHWEIZ AG ; CONSTR RES AND TECH GMBH ; CONSTRUCTION RES AND TECH GMBH ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): NICOLEAU LUC ; LEITNER HUBERT ; CONSTRUCTION RESEARCH TECHNOLOGY GMBH

Inventor(s): (std): LEITNER HUBERT ; NICOLEAU LUC

Inventor(s): HUBERT LEITNER ; LUC NICOLEAU

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; GOWLING LAFLEUR HENDERSON LLP; BASF IP ASSOCIATION; OKTAY SIMSEK; SALVATORE A; JOSEPH G; CURATOLO SIDOTI CO LPA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
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CN104684862 A	20150603	LSPB	+C06	PUBLICATION	
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EP2882695 A1	20160817	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 103/14 20060101ALN20160714BHEP
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JP2015528793 T2	20151001	LSPB	+	published / reissued	
JP2015528793 T2	20160809	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	TEXT : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20160809
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RU2015108660 A	20160927	LSPB	+	published / reissued	
TR201703887 T4	20170421	LSGT	+	granted / extensions (spc, cpc, pte)	
US2015197448 AA	20150716	LSPB	+	published / reissued	
US2015197448 AA	20150430	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: NICOLEAU, LUC; LEITNER, HUBERT; SIGNING DATES FROM 20150226 TO 20150303; REEL/FRA: 035533/0693
US9650298 BB	20170516	LSGT	+	granted / extensions (spc, cpc, pte)	
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WO14026940 A1	20150212	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : P200/2015 COUNTRY OF REF DOCUMENT : AE
WO14026940 A1	20150213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2015526953 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO14026940 A1	20150213	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
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WO14026940 A1	20150313	LSNP	ENP	ENTRY INTO THE	REF DOCUMENT NUMBER :

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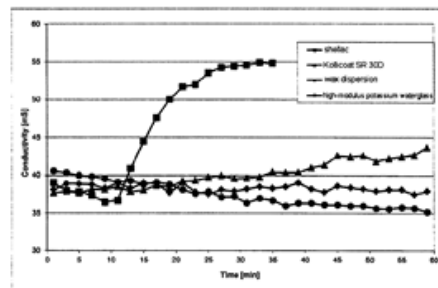
Title: CEMENTITIOUS SYSTEM COMPRISING ACCELERATOR PARTICLES COATED WITH CROSSLINKED SHELLAC

Abstract: Source: US2016122245A A proposal is made for a cementitious system which comprises accelerator particles coated with crosslinked shellac, for the use as an additive component which comprises the accelerator particles coated with crosslinked shellac, and for a cement slurry which comprises the cementitious system and water.

Classifications:

International (IPC 8-9): C04B14/06 C04B20/10 C04B20/12 C04B22/00 C04B22/08 C04B22/14 C04B24/34 C04B28/02 C04B28/04 C04B28/06 C04B28/14 (Advanced/Invention); C04B103/00 C04B103/10 C04B103/14 (Advanced/Non-invention)
CPC: C04B24/34 C04B22/147 C04B14/06 C04B2103/14 C04B28/04 C04B2103/0062 C04B20/104 C04B20/12 C04B28/02 C04B28/021 C04B28/06 C04B28/065 C04B28/14 C04B2103/10 C04B12/04 C04B22/0086 C04B22/0093 C04B22/085 C04B22/124 C04B22/148 C04B14/28 C04B14/22 C04B20/107 C04B20/1037 C04B40/0608 C04B7/02 C04B7/32 C04B7/323 C04B40/065 C04B2103/0088
US: 1/1 106/657

PatBase - US2016122245_AA



Family:

Publication number	Publication date	Application number	Application date
AU2014280481 AA	20141218	AU20140280481	20140521
CA2914239 AA	20151202	CA20142914239	20140521
CN105308000 A	20160203	CN201480033786	20140521
EP2813480 A1	20141217	EP20130171949	20130614
EP3008030 A1	20160420	EP20140725453	20140521
IN201647000272 A	20160701	IN201647000272	20160105
JP2016521672 T2	20160725	JP20160518894T	20140521
MX2015017008 A1	20160425	MX20150017008	20140521
US2016122245 AA	20160505	US20140893194	20140521
US9428419 BB	20160830	US20140893194	20140521
WO14198505 A1	20141218	WO2014EP60406	20140521

Priority:

EP20130171949 20130614 EP20140725453 20140521 WO2014EP60406 20140521

Probable Assignee: CONSTR RES AND TECH GMBH

Assignee(s): (std): CONSTR RES AND TECH GMBH ; CONSTRUCTION RES AND TECH GMBH ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): RIEDMILLER JOACHIM ; STOHR WERNER ; SEIDL WOLFGANG ; ZURN SIEGFRIED ; WACHE STEFFEN ; SCHWARZ VOLKER

Inventor(s): (std): RIEDMILLER JOACHIM ; SCHWARZ VOLKER ; SEIDL WOLFGANG ; STOHR WERNER ; WACHE STEFFEN ; ZUERN SIEGFRIED ; ZURN SIEGFRIED

Inventor(s): JOACHIM RIEDMILLER ; WERNER STOHR ; WOLFGANG SEIDL ; VOLKER SCHWARZ ; SIEGFRIED ZUERN ; STEFFEN WACHE

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; GOWLING LAFLEUR HENDERSON LLP; SALVATORE A; JOSEPH G; CURATOLO SIDOTI CO LPA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2014280481 AA	20141218	LSPB	+	published / reissued	
CA2914239 AA	20151202	LSPB	+	published / reissued	
CN105308000 A	20160203	LSPB	+	published / reissued	
CN105308000 A	20160203	LSPB	+C06	PUBLICATION	
EP2813480 A1	20141217	LSPB	+	published / reissued	
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EP3008030 A1	20160420	LSPB	+	published / reissued	
EP3008030 A1	20160420	LSES	+17P	REQUEST FOR	EFFECTIVE DATE : 20160114

EXAMINATION FILED					
IN201647000272 A	20160701	LSPB	+	published / reissued	
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MX2015017008 A1	20160425	LSPB	+	published / reissued	
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US2016122245 AA	20160217	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SEIDL, WOLFGANG; WACHE, STEFFEN; STOHR, WERNER; AND OTHERS; SIGNING DATES FROM 20160204 TO 20160206; REEL/FRA:037757/0787
US9428419 BB	20160830	LSGT	+	granted / extensions (spc, cpc, pte)	
US9428419 BB	20160729	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	
WO14198505 A1	20141218	LSPB	+	published / reissued	
WO14198505 A1	20151123	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14893194 COUNTRY OF REF DOCUMENT : US
WO14198505 A1	20151202	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2914239 COUNTRY OF REF DOCUMENT : CA
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WO14198505 A1	20151214	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO14198505 A1	20160107	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014280481 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140521 KIND CODE OF REF DOCUMENT : A

Title: PASSIVATED CEMENT ACCELERATOR

Abstract: Source: US2017002257A Embodiments relate to cementing operations and, in certain embodiments, to passivated cement accelerators and methods of using passivated cement accelerators in subterranean formations. An embodiment may comprise a method of cementing comprising: providing a cement composition comprising cement, water, and a passivated cement accelerator; and allowing the cement composition to set.

Classifications:

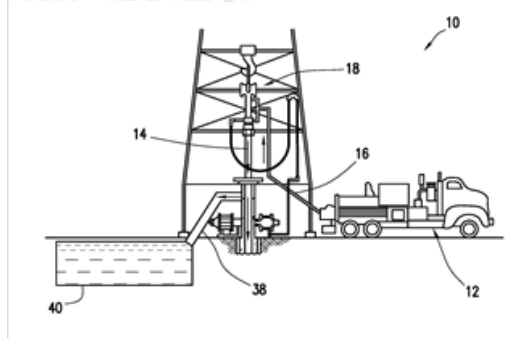
International (IPC 8-9): C04B22/00 C04B22/06 C04B22/08 C04B22/12 C04B22/16 C04B24/12 C04B24/18 C04B24/22 C04B24/26 C04B24/38 C04B28/00 C04B28/02 C04B28/04 C04B28/18 C04B28/34 C04B40/06 C09K8/467 E21B33/138 E21B33/16 E21B43/22 (Advanced/Invention);

C04B103/10 C04B103/20 (Advanced/Non-invention)

CPC: C04B28/02 C04B28/18 C04B28/34 C04B2103/10 Y02P40/143 C04B40/06 C04B28/04 C04B22/00 E21B33/138 C04B2103/12 C04B2103/0036 E21B36/003 E21B41/02 E21B43/14 E21B43/26 C09K8/467 C04B2103/20 E21B33/16

US: 166/293

PatBase - US2017002257_AA



Family:

Publication number	Publication date	Application number	Application date
AU2014384686 AA	20150903	AU20140384686	20140227
CA2933004 AA	20160607	CA20142933004	20140227
CN105980515 A	20160928	CN201480066884	20140227
GB201608913 A0	20160706	GB20160008913	20140227
GB2534810 A1	20160803	GB20160008913	20140227
JP2017508709 T2	20170330	JP20160560614T	20140227
MX2016009746 A1	20161031	MX20160009746	20140227
NO20161155 A	20160712	NO20160001155	20160712
US2017002257 AA	20170105	US20140113163	20140227
WO15130284 A1	20150903	WO2014US18910	20140227

Priority:

US20140113163 20140227 WO2014US18910 20140227

Probable Assignee: HALLIBURTON ENERGY SERVICES INC

Assignee(s): (std): HALLIBURTON ENERGY SERVICES INC ; HALLIBURTON ENERGY SERVICES INC

Assignee(s): LEWIS SAMUEL JASON ; PISKLAK THOMAS JASON ; OTIENO PAULINE AKINYI ; AGAPIOU KYRIACOS

Inventor(s): (std): AGAPIOU KYRIACOS ; KYRIACOS AGAPIOU ; LEWIS SAMUEL JASON ; OTIENO PAULINE AKINYI ; PAULINE AKINYI OTIENO ; PISKLAK THOMAS JASON ; SAMUEL JASON LEWIS ; THOMAS JASON PISKLAK

Agent(s): FB RICE; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; YAMASAKI KAZUO; NISHIJIMA TAKAKI; HAKODA ATSUSHI; HATTORI HIRONOBU; ICHIKAWA SATSUKI; ASAI KENJI; DESHIMARU TAKESHI; TUMEY COREY S

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
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CA2933004 AA	20160607	LSPB	+	published / reissued	
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CN105980515 A	20160928	LSPB	+C06	PUBLICATION	
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NO20161155 A	20160712	LSPB	+	published / reissued	
US2017002257 AA	20170105	LSPB	+	published / reissued	

US2017002257 AA	20160725	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PISKLAK, THOMAS JASON; AGAPIOU, KYRIACOS; OTIENO, PAULINE AKINYI; AND OTHERS; SIGNING DATES FROM 20140304 TO 20140314; REEL/FRAME:039248/0784
WO15130284 A1	20150903	LSPB	+	published / reissued	
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WO15130284 A1	20160602	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014384686 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20140227 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15130284 A1	20160607	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2933004 COUNTRY OF REF DOCUMENT : CA
WO15130284 A1	20160621	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016560614 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15130284 A1	20160721	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15113163 COUNTRY OF REF DOCUMENT : US
WO15130284 A1	20160829	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15130284 A1	20170322	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14883785 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1 DESIGNATED STATE(S) :

Title: SOLIDIFICATION AND HARDENING ACCELERATOR FOR HYDRAULIC BINDERS

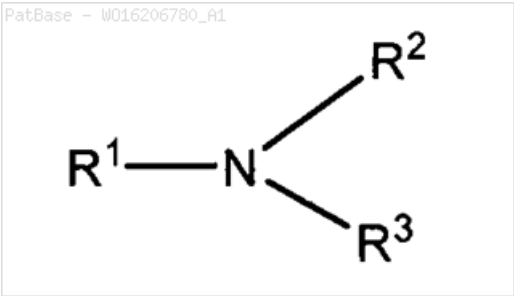
Abstract: The invention relates to an additive that accelerates the development of strength of hydraulic binders, comprising an alkanolamine of the formula in which R1 stands for an alkyl with at least 3 hydroxyl groups, and R2 and R3 stand, independently of one another, for an alkyl group or a monovalent or polyvalent alkanol group, and to a method for accelerating the strength development of hydraulic binders, where this is added.

Classifications:

International (IPC 8-9): C04B24/12 C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B24/122 C04B28/04 C04B40/0039 C04B2103/14 C04B2103/52 Y02W30/92

PatBase - WO16206780_A1



Family:

Publication number	Publication date	Application number	Application date
EP3109216 A1	20161228	EP20150001837	20150622
WO16206780 A1	20161229	WO2016EP00945	20160609

Priority:

EP20150001837 20150622

Probable Assignee: HEIDELBERGCEMENT AG

Assignee(s): (std): HEIDELBERGCEMENT AG

Inventor(s): (std): NIED DOMINIK ; ZAJAC MACIEJ

Agent(s): WAGNER JUTTA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP3109216 A1	20161228	LSPB	+	published / reissued	
WO16206780 A1	20161229	LSPB	+	published / reissued	

Title: HYDRAULIC CEMENT SET-ACCELERATING ADMIXTURES INCORPORATING GLYCOLS**Abstract:** Source: US5340385A New set-accelerating admixtures for hydraulic cement compositions are disclosed. These admixtures incorporate known set accelerators and certain low molecular weight glycols, e.g., glycerol and ethylene glycol, are found to be surprisingly effective in decreasing the initial set time of hydraulic cements, mortars, and concretes, and are advantageous as reduced-temperature set-accelerators.**Classifications:****International (IPC 8-9):** C04B22/00 C04B22/06 C04B22/08 C04B22/12 C04B24/00 C04B24/02 C04B24/04 C04B24/12 C04B24/14 C04B28/00 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention);

C04B103/14 (Advanced/Non-invention);

C04B22/00 C04B24/00 C04B28/00 (Core/Invention)

International (IPC 1-7): C04B103/14 C04B22/00 C04B22/06 C04B22/08 C04B22/12 C04B24/00 C04B24/02 C04B24/04 C04B24/12 C04B24/14 C04B28/00 C04B28/02 C04B28/04 C04B40/00 C04B9/02 C07C31/22**CPC:** C23F11/08 C04B40/0039 C04B24/02 C04B28/02 C04B2103/12 C04B2103/61 C23F11/181**European:** C04B24/02 C04B28/02 C04B40/00D4 M04B103/12 M04B103/61**US:** 106/14.05 106/14.14 106/14.21 106/14.44 106/696 106/724 106/785 106/819 106/823

END

Family:

Publication number	Publication date	Application number	Application date
AT159235 E	19971115	AT19930300546T	19930126
AU199331117 A1	19930729	AU19930031117	19930111
AU668701 B2	19960516	AU19930031117	19930111
CA2086648 AA	19930729	CA19932086648	19930104
CA2086648 C	19990323	CA19932086648	19930104
CN1041708 C	19990120	CN19941013758	19940923
CN1094477 C	20021120	CN19981006335	19980403
CN1107127 A	19950823	CN19941013758	19940923
CN1216293 A	19990512	CN19981006335	19980403
DE69314508 D1	19971120	DE19936014508	19930126
DE69314508 T2	19980423	DE19936014508T	19930126
EP0554046 A1	19930804	EP19930300546	19930126
EP0554046 B1	19971015	EP19930300546	19930126
HK1002255 A1	19980807	HK19980101243	19980218
JP2788834 B2	19980820	JP19930027179	19930125
JP6199555 A2	19940719	JP19930027179	19930125
KR0133274 B1	19980413	KR19930000956	19930125
MX9300372 A1	19930701	MX19930000372	19930125
NZ245634 A	19950828	NZ19930245634	19930107
SG46202 A1	19980220	SG19960000539	19930126
TH14547 A	19940826	TH19931000116	19930127
TH9882 B	20001012	TH19931000116	19930127
US5340385 A	19940823	US19930046110	19930409
US5348583 A	19940920	US19930125905	19930924

Priority:CA19932086648 19930104 US19920827196 19920128 US19930046110 19930409
US19930125905 19930924**Probable Assignee:** W R GRACE AND CO CONN**Assignee(s):** (std): GRACE W R AND CO**Assignee(s):** GRACE W R AND CO CONN ; WR GRACE AND CO ; W R GRACE AND CO ; WRGRACE AND CO CONN ; W R GRACE AND CO CONN ; WR GRACE AND CO CONN ; W R GRACE AND CO CONN NEW YORK N Y US ; JEKNAVORIAN ARA A ; GRACE WR AND CO CONN ; ARFAEI AHMAD ; BERKE NEAL S ; DABURYU AARU GUREESU ANDO CO KONETEIKATSUTO**Inventor(s):** (std): MYERS DAVID F ; JEKNAVORIAN ARA ; HARTMAN JUDITHANN R ; GARTNER ELLIS M ; GARTNER E M ; BERKE NEAL ; ARFAEL AHMAD ; ARFAEI ARMAD ; NIIRU ESU BAAKU ; ARA EI JIEKUNABORIAN ; JEKNAVORIAN ARA A ; JEKNAVORIAN A A ; BERKE NEAL S ; BERKE N S ; ARFAEI AHMAD ; ARFAEI A ; AMADO AAFUAEI**Inventor(s):** AHMAD ARFAEI ; N S BERKE ; A A JEKNAVORIAN ; ELLIS M GARTNER ; E M GARTNER ; ARA EI JEKUNABORIAN ; ARA A JEKNAVORIAN ; NEAL S BERKE ; AHMAD ARFAEL ; NS BERKE ; EM GARTNER ; A ARFAEI ; ARFAEI AHMAD CHELMSFORD MA 01824 US**Agent(s):** PHILLIPS ORMONDE FITZPATRICK; SMART AND BIGGAR

Designated states: AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT159235 E	19971115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT159235 E	19980415	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU199331117 A1	19930729	LSPB	+	published / reissued	
AU668701 B2	19960516	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2086648 AA	19930729	LSPB	+	published / reissued	
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CN1041708 C	19950823	LSPB	+C06	PUBLICATION	
CN1041708 C	19990120	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1041708 C	20131113	LSLE	-C17	CESSATION OF PATENT RIGHT	
CN1094477 C	20021120	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1094477 C	19990512	LSPB	+C06	PUBLICATION	
CN1094477 C	20021120	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1094477 C	20131113	LSLE	-C17	CESSATION OF PATENT RIGHT	
CN1107127 A	19950823	LSPB	+	published / reissued	
CN1216293 A	19990512	LSPB	+	published / reissued	
DE69314508 D1	19981112	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
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EP0554046 A1	19951115	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19950927
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EP0554046 A1	20100531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100205 YEAR OF FEE PAYMENT : 18
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EP0554046 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110125 YEAR OF FEE PAYMENT : 19
EP0554046 A1	20120926	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20120126
EP0554046 A1	20121019	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20120928
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JP2788834 B2	19980820	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2788834 B2	20040622	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
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KR0133274 B1	19980413	LSGT	+	granted / extensions (spc, cpc, pte)	
KR0133274 B1	19950306	LSES	A201	REQUEST FOR EXAMINATION	
KR0133274 B1	19970703	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR0133274 B1	19971104	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR0133274 B1	19971219	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR0133274 B1	20101213	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20101214 YEAR OF FEE PAYMENT : 14
KR0133274 B1	20111220	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
MX9300372 A1	19930701	LSPB	+	published / reissued	
MX9300372 A1	19971119	LSGT	+FG	GRANT OR REGISTRATION	
MX9300372 A1	20141031	LSLE	-MM	ANNULMENT OR LAPSE DUE TO NON-PAYMENT OF FEES	
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NZ245634 A	20030131	LSFE	+RENEW	RENEWAL (RENEWAL FEES ACCEPTED)	
SG46202 A1	19980220	LSPB	+	published / reissued	
TH14547 A	19940826	LSPB	+	published / reissued	
TH9882 B	20001012	LSGT	+	granted / extensions (spc, cpc, pte)	
US5340385 A	19940823	LSGT	+	granted / extensions (spc, cpc, pte)	
US5340385 A	19980209	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5340385 A	20020131	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5340385 A	20060223	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5348583 A	19940920	LSGT	+	granted / extensions (spc, cpc, pte)	
US5348583 A	19931123	LSAS	AS	ASSIGNMENT	OWNER NAME : W. R. GRACE AND CO.-CONN, NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ARFAEI, AHMAD; BERKE, NEAL S.; JEKNAVORIAN, ARA A.; AND OTHERS; REEL/FRAAME:006772/0726; SIGNING DATES FROM 19931103 TO 19931112
US5348583 A	19980309	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5348583 A	20020221	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5348583 A	20060320	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

Title: SETTING AND HARDENING ACCELERATING AGENT FOR SILICEOUS HYDRAULIC BINDERS

Abstract: Source: US5709743A PCT No. PCT/FR94/00744 Sec. 371 Date Jun. 28, 1996 Sec. 102(e) Date Jun. 28, 1996 PCT Filed Jun. 20, 1994 PCT Pub. No. WO95/04007 PCT Pub. Date Feb. 9, 1995 Setting and hardening accelerating agent for siliceous hydraulic binders wherein: a) it is obtained by hydration, in the usual pressure and temperature conditions, and grinding of a siliceous hydraulic binder aqueous suspension; b) the suspension particles are sufficiently fine for the agent to meet the following test requirements: an aqueous suspension in a sedimentation specimen at 20 DEG C., containing 10 grams (dry weight) of the accelerating agent in 100 ml of water, must have a sedimentation deposit height at least equal to 50 percent of the initial height at the end of two days; c) it is in the form of an aqueous suspension.

Classifications:

International (IPC 8-9): C04B22/00 C04B22/06 C04B22/08 C04B28/02 (Advanced/Invention);

C04B103/12 C04B103/14 (Advanced/Non-invention);

C04B22/00 C04B28/00 (Core/Invention)

International (IPC 1-7): C04B103/10 C04B103/12 C04B103/14 C04B22/00 C04B22/06 C04B22/08 C04B28/02

CPC: C04B2103/12 C04B2103/14 C04B28/02 C04B22/0086

European: C04B22/00N C04B28/02 M04B103/10

US: 106/713 106/735 106/737 106/785 106/819

Family:

Publication number	Publication date	Application number	Application date
AT161245 E	19980115	AT19940919739T	19940620
CA2168253 AA	19960126	CA19942168253	19940620
CA2168253 C	20050329	CA19942168253	19940620
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EP0711259 B1	19971217	EP19940919739	19940620
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FR2708592 B1	19950929	FR19930009582	19930729
JP3607291 B2	20050105	JP19950505604T	19940620
JP9500605 T2	19970121	JP19950505604T	19940620
US5709743 A	19980120	US19960586697	19960628
WO9504007 A1	19950209	WO1994FR00744	19940620

Priority:

FR19930009582 19930729 WO1994FR00744 19940620

Probable Assignee: LAFARGE COPPEE

Assignee(s): (std): CHAPPUIS JACQUES ; LAFARGE COPPEE ; LAFARGE SA ; LETURE PHILIPPE ; LATRASSE BRUNO

Assignee(s): BANK OF AMERICA ILLINOIS ; LAFARGE COPPEE S A ; LAFARGE PARIS FR ; LAFARGE

Inventor(s): (std): BRUNO LATRASSE ; CHAPPUIS JACQUES ; JACQUES CHAPPUIS ; LATRASSE BRUNO ; LETURE PHILIPPE ; PHILIPPE LETURE

Inventor(s): LETURE PHILIPPE F 69100 VILLEURBANNE FR ; LATRASSE BRUNO F 38090 VILLEFONTAINE FR ; CHAPPUIS JACQUES F 38290 FRONTONAS FR

Agent(s): GOWLING LAFLEUR HENDERSON LLP

Designated states: AT BE BR CA CH CN DE DK ES FI FR GB GR IE IT JP LI LU MC NL NO PT SE US

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
AT161245 E	19980115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT161245 E	19980815	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	
CA2168253 AA	19960126	LSPB	+	published / reissued	
CA2168253 AA	19960126	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2168253 AA	20010312	LSES	+EEER	EXAMINATION REQUEST	
CA2168253 AA	20140824	LSLE	-MKEX	EXPIRY	EFFECTIVE DATE : 20140620
CA2168253 C	20050329	LSGT	+	granted / extensions (spc, cpc, pte)	
DE69407418 D1	19990121	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE69407418 T2	19980514	LSGT	+	granted / extensions (spc, cpc, pte)	

DK0711259 T3	19980824	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0711259 A1	19960515	LSPB	+	published / reissued	
EP0711259 A1	19960515	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19960223
EP0711259 A1	19970521	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19970404
EP0711259 A1	19971231	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP0711259 A1	19980201	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2110245 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 FORMAT OF REF DOCUMENT (F/P) : P
EP0711259 A1	19981209	LSGT	+26N	NO OPPOSITION FILED	
EP0711259 A1	20090731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20090609 YEAR OF FEE PAYMENT : 16
EP0711259 A1	20090731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20090527 YEAR OF FEE PAYMENT : 16
EP0711259 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20090525 YEAR OF FEE PAYMENT : 16
EP0711259 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20090522 YEAR OF FEE PAYMENT : 16
EP0711259 A1	20090930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20090528 YEAR OF FEE PAYMENT : 16
EP0711259 A1	20091030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090630 YEAR OF FEE PAYMENT : 16
EP0711259 A1	20091030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20090616 YEAR OF FEE PAYMENT : 16
EP0711259 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090703 YEAR OF FEE PAYMENT : 16
EP0711259 A1	20100715	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PFA OWNER NAME : LAFARGE DESCRIPTION : LAFARGE#61-63, RUE DES BELLES FEUILLES#75116 PARIS (FR) -TRANSFER TO- LAFARGE#61-63, RUE DES BELLESFEUILLES#75116 PARIS (FR)
EP0711259 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20100525 YEAR OF FEE PAYMENT : 17
EP0711259 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20100611 YEAR OF FEE PAYMENT : 17
EP0711259 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20100521 YEAR OF FEE PAYMENT : 17
EP0711259 A1	20101029	LSFE	+PGFP	POSTGRANT: ANNUAL FEES	REF COUNTRY CODE : BE PAYMENT DATE : 20100526

				PAID TO NATIONAL OFFICE	YEAR OF FEE PAYMENT : 17
EP0711259 A1	20101029	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20100525 YEAR OF FEE PAYMENT : 17
EP0711259 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100610 YEAR OF FEE PAYMENT : 17
EP0711259 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100729 YEAR OF FEE PAYMENT : 17
EP0711259 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20100525 YEAR OF FEE PAYMENT : 17
EP0711259 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20110603 YEAR OF FEE PAYMENT : 18
EP0711259 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20110609 YEAR OF FEE PAYMENT : 18
EP0711259 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20110526 YEAR OF FEE PAYMENT : 18
EP0711259 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20110524 YEAR OF FEE PAYMENT : 18
EP0711259 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20110525 YEAR OF FEE PAYMENT : 18
EP0711259 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20110531 YEAR OF FEE PAYMENT : 18
EP0711259 A1	20111031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110727 YEAR OF FEE PAYMENT : 18
EP0711259 A1	20111130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110606 YEAR OF FEE PAYMENT : 18
EP0711259 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120524 YEAR OF FEE PAYMENT : 19
EP0711259 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120705 YEAR OF FEE PAYMENT : 19
EP0711259 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120705 YEAR OF FEE PAYMENT : 19
EP0711259 A1	20121231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20120614 YEAR OF FEE PAYMENT : 19
EP0711259 A1	20130121	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP
EP0711259 A1	20130129	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP0711259 A1	20130215	LSLE	REG	REFERENCE TO A	REF COUNTRY CODE : CH

				NATIONAL CODE	REF LEGAL EVENT CODE : PL
EP0711259 A1	20130228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120621
EP0711259 A1	20130329	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20120524 YEAR OF FEE PAYMENT : 19
EP0711259 A1	20130430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120630
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EP0711259 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120702
EP0711259 A1	20130731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20130523 YEAR OF FEE PAYMENT : 20
EP0711259 A1	20131129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20130724 YEAR OF FEE PAYMENT : 20
EP0711259 A1	20140621	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R071 REF DOCUMENT NUMBER : 69407418 COUNTRY OF REF DOCUMENT : DE
EP0711259 A1	20140815	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MK07 REF DOCUMENT NUMBER : 161245 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20140620
EP0711259 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20140621
EP0711259 A1	20140926	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20140926
EP0711259 A1	20141128	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF EXPIRATION OF PROTECTION EFFECTIVE DATE : 20140621
EP0711259 B1	19971217	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2110245 T3	19980201	LSGT	+	granted /	

ES2110245 T3	19980201	LSGT	+FG2A	extensions (spc, cpc, pte) DEFINITIVE PROTECTION	REF DOCUMENT NUMBER : 711259 COUNTRY OF REF DOCUMENT : ES
FR2708592 A1	19950210	LSPB	+	published / reissued	
FR2708592 A1	20000721	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2708592 B1	19950929	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3607291 B2	20050105	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3607291 B2	20040511	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20040511
JP3607291 B2	20040729	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20040713
JP3607291 B2	20040825	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP3607291 B2	20040907	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20040907
JP3607291 B2	20041014	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20041007
JP3607291 B2	20041015	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP3607291 B2	20071004	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20071015 YEAR OF FEE PAYMENT : 3
JP3607291 B2	20071009	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20081015 YEAR OF FEE PAYMENT : 4
JP3607291 B2	20081007	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20091015 YEAR OF FEE PAYMENT : 5
JP3607291 B2	20091013	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20101015 YEAR OF FEE PAYMENT : 6
JP3607291 B2	20101005	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20111015 YEAR OF FEE PAYMENT : 7
JP3607291 B2	20111015	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP9500605 T2	19970121	LSPB	+	published / reissued	
US5709743 A	19980120	LSGT	+	granted / extensions (spc, cpc, pte)	
US5709743 A	19970711	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA ILLINOIS, ILLINOIS DESCRIPTION : SECURITY AGREEMENT; ASSIGNORS:MPD, INC.; MPH INDUSTRIES, INC., A KENTUCKY CORPORATION; CMI, INC., A KENTUCKY CORPORATION; REEL/FRAME:008677/0796 EFFECTIVE DATE : 19970625
US5709743 A	19970922	LSAS	AS	ASSIGNMENT	OWNER NAME : LAFARGE COPPEE

(S.A.), FRANCE
 DESCRIPTION : ASSIGNMENT OF
 ASSIGNORS INTEREST;
 ASSIGNORS:LEURE, PHILIPPE;
 CHAPPUIS, JACQUES; LATRASSE,
 BRUNO; REEL/FRA:008716/0733;
 SIGNING DATES FROM 19960104 TO
 19960105

US5709743 A	20010628	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5709743 A	20050624	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5709743 A	20090630	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO9504007 A1	19950209	LSPB	+	published / reissued	
WO9504007 A1	19960126	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2168253 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9504007 A1	19960126	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2168253 COUNTRY OF REF DOCUMENT : CA
WO9504007 A1	19960223	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1994919739 COUNTRY OF REF DOCUMENT : EP
WO9504007 A1	19960515	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1994919739 COUNTRY OF REF DOCUMENT : EP
WO9504007 A1	19960628	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 08586697 COUNTRY OF REF DOCUMENT : US
WO9504007 A1	19971217	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1994919739 COUNTRY OF REF DOCUMENT : EP

Title: INORGANIC DISSOLUTION ACCELERATOR MAKING METAL OR INORGANIC SUBSTANCE WATER-SOLUBLE

Abstract: Source: US2005075410A The invention provides an inorganic dissolution accelerator used for obtaining a water-soluble inorganic compound(s), high in concentration and containing a large solid content, which accelerator is prepared by making one or more compounds selected from fluorides, mineral acids, mineral "ous" acids and salts thereof, and boric acid compounds, all either natural or synthetic, coexist with an alkali metal and/or substance containing an alkaline metal, and is able to transform metals and inorganic substances present in water, either natural or synthetic, containing as the main component silicon Si, aluminum Al, and/or boron B, into amorphous highly water-soluble inorganic compounds having the solubilities equal to, or larger than those well known in the art.

Classifications:

International (IPC 8-9): B01F1/00 C04B22/08 C04B28/00 C04B28/02 C04B28/04 C04B28/06 C04B40/00 C08G18/00 C08K3/38 C08L75/04 C09D1/00 C09D5/20 C09K21/02 C09K21/14 C09K3/00 (Advanced/Invention); C04B22/00 C04B28/00 C04B40/00 C09D1/00 C09D5/20 C09K21/00 (Core/Invention)

International (IPC 1-7): B01F1/00 C04B22/08 C04B28/04 C04B28/06 C08G18/00 C09K3/00

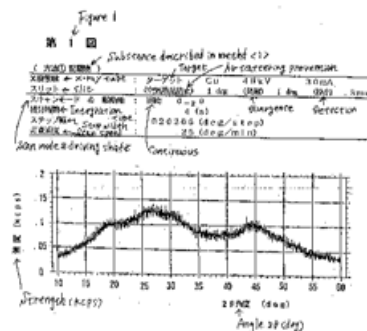
CPC: Y02P40/165 C09K21/14 C04B28/006 C04B28/04 C04B28/06 C04B28/26 C04B40/0039 C04B2103/10 C04B2111/28 C09K21/02 C09K21/04

European: C04B28/00G C04B28/04 C04B28/06 C04B28/26 C04B40/00D4 C09K21/02 C09K21/14 M04B103/10 M04B111/28

US: 106/2 106/286.1 106/286.100P 106/286.7 106/286.700S 106/286.8 106/286.800S 106/2S 106/692 106/692S 106/713 106/713S 106/819 106/819S 521/155

PatBase - US2005075410_AA

Patent Application Publication Apr. 7, 2005 Sheet 1 of 3 US 2005/075410 A1

**Family:**

Publication number	Publication date	Application number	Application date
AU2002230194 AA	20020819	AU20020230194	20020208
CA2441101 AA	20030912	CA20022441101	20020208
EP1371706 A1	20031217	EP20020711405	20020208
EP1371706 A4	20090722	EP20020711405	20020208
JP2002062916 A1	20040610	JP20020563258T	20020208
JP4474102 B1	20100602	JP20020563258T	20020208
JP4474102 B2	20100602	JP20020563258T	20020208
US2005075410 AA	20050407	US20030467277	20030806
US2007137525 AA	20070621	US20070649289	20070104
WO2002062916 A1	20020815	WO2002JP01072	20020208

Priority:

JP20010032671 20010208 US20030467277 20030806 US20070649289 20070104
 WO2002JP01072 20020208

Probable Assignee: KOKUTA HIROSHI

Assignee(s): (std): HIROSHI KOKUTA ; KOKUTA HIROSHI ; KOKUTA KATSUHIRO ; KOKUTA KENJI ; KOKUTA NAOTO ; UCHIDA HIDEAKI

Inventor(s): (std): KOKUTA HIROSHI ; KOKUTA KATSUHIRO ; KOKUTA KENJI ; KOKUTA NAOTO ; UCHIDA HIDEAKI

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; BORDEN LADNER GERVAIS LLP; YAMASAKI YUKUZO; AKAMATSU TOSHIKI; SUGIYAMA NAOTO; SHIROGANE HIROSHI; MCGINN AND GIBB; MCGINN INTELLECTUAL PROPERTY LAW GROUP PLLC

Designated states: AU BR CA CN DE FR GB ID IT JP KR NL NZ PH US

Legal status (INPADOC)

View legal status timeline

Patent	Date recorded	Event group	Code	Event	Details
AU2002230194 AA	20020819	LSPB	+	published / reissued	
CA2441101 AA	20030912	LSPB	+	published / reissued	
CA2441101 AA	20030912	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2441101 AA	20050124	LSSES	+EEER	EXAMINATION REQUEST	
CA2441101 AA	20090209	LSLE	-FZDE	DEAD	
EP1371706 A1	20031217	LSPB	+	published /	

EP1371706 A1	20031217	LSSES	+17P	reissued REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20030908
EP1371706 A1	20090722	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20090618
EP1371706 A1	20091028	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090929
EP1371706 A1	20100421	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20090901
JP2002062916 A1	20040610	LSPB	+	published / reissued	
JP4474102 B1	20100602	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4474102 B2	20100602	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4474102 B2	20050120	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20050119
JP4474102 B2	20050120	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20050119
JP4474102 B2	20070517	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20070516
JP4474102 B2	20080401	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080401
JP4474102 B2	20080530	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20080529
JP4474102 B2	20080626	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20080529
JP4474102 B2	20090812	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20090811
JP4474102 B2	20091112	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20091111
JP4474102 B2	20091124	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20091120
JP4474102 B2	20100201	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4474102 B2	20100210	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100209
JP4474102 B2	20100210	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100209
JP4474102 B2	20100212	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4474102 B2	20100311	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100308
JP4474102 B2	20100311	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100308

JP4474102 B2	20100312	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130312 YEAR OF FEE PAYMENT : 3
JP4474102 B2	20100312	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R 150
US2005075410 AA	20050407	LSPB	+	published / reissued	
US2005075410 AA	20030806	LSAS	AS	ASSIGNMENT	OWNER NAME : KOKUTA, HIROSHI, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KOKUTA, HIROSHI; KOKUTA, KATSUHIRO; UCHIDA, HIDEAKI; AND OTHERS; REEL/FRAME:014722/0558 EFFECTIVE DATE : 20030717
US2007137525 AA	20070621	LSPB	+	published / reissued	
US2007137525 AA	20070221	LSAS	AS	ASSIGNMENT	OWNER NAME : KOKUTA, HIROSHI, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KOKUTA, HIROSHI; KOKUTA, KATSUHIRO; UCHIDA, HIDEAKI; AND OTHERS; REEL/FRAME:018940/0336; SIGNING DATES FROM 20070115 TO 20070125
US2007137525 AA	20100530	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
WO02062916 A1	20020815	LSPB	+	published / reissued	
WO02062916 A1	20030806	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10467277 COUNTRY OF REF DOCUMENT : US
WO02062916 A1	20030808	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002563258 COUNTRY OF REF DOCUMENT : JP
WO02062916 A1	20030908	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002711405 COUNTRY OF REF DOCUMENT : EP
WO02062916 A1	20030908	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002230194 COUNTRY OF REF DOCUMENT : AU
WO02062916 A1	20030912	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2441101 COUNTRY OF REF DOCUMENT : CA
WO02062916 A1	20031217	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002711405 COUNTRY OF REF DOCUMENT : EP

Title: ACCELERATOR FOR HYDRAULIC BINDERS

Abstract: Source: US2013112116A The invention relates to additives for hydraulic binders and systems produced from them, such as concrete and mortar. In particular, the present invention relates to a setting and hardening accelerator for hydraulic binders produced by means of reaction of a calcium compound CV with a silicon compound SV and addition of a phosphonic acid derivative, as well as its production.

Classifications:

International (IPC 8-9): C04B24/00 C04B24/24 C04B28/02 C04B40/00 (Advanced/Invention)

CPC: C04B24/003 C04B24/243 C04B28/02 C04B40/0039 C04B2103/12 C04B2103/14

European: C04B24/24D C04B28/02 C04B40/00D4 M04B103/12 M04B103/14

US: 106/630 106/691 106/724 106/781 106/795 106/806 106/823

Family:

Publication number	Publication date	Application number	Application date
DE502011007149 D1	20150806	DE201150007149T	20110824
EP2423175 A1	20120229	EP20100173833	20100824
EP2609055 A1	20130703	EP20110748933	20110824
EP2609055 B1	20150624	EP20110748933	20110824
US2013112116 AA	20130509	US20110810843	20110824
US8608847 BB	20131217	US20110810843	20110824
WO12025567 A1	20120301	WO2011EP64553	20110824

Priority:

EP20100173833 20100824 EP20110748933 20110824 WO2011EP64553 20110824

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): BUERGE CHRISTIAN ; KURZ CHRISTOPHE ; MAEDER GILBERT ; MARAZZANI BEAT ; SIKA TECHNOLOGY AG ; SULSER UELI ; WOMBACHER FRANZ

Inventor(s): (std): BUERGE CHRISTIAN ; BUERGE CHRISTIAN M ; KURZ CHRISTOPHE ; MAEDER GILBERT ; MARAZZANI BEAT ; SULSER UELI ; WOMBACHER FRANZ

Agent(s): MEISSNER BOLTE AND PARTNER GBR; SIKA PATENT ATTORNEYS; OLIFF AND BERRIDGE PLC

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2423175 A1	20120229	LSPB	+	published / reissued	
EP2423175 A1	20130227	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20120830
EP2609055 A1	20130703	LSPB	+	published / reissued	
EP2609055 A1	20130703	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20130325
EP2609055 A1	20140910	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20140811
EP2609055 A1	20150211	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20150115
EP2609055 A1	20150624	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2609055 A1	20150630	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2609055 A1	20150715	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 732805 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20150715
EP2609055 A1	20150729	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT: GERMAN
EP2609055 A1	20150806	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 502011007149

					COUNTRY OF REF DOCUMENT : DE
EP2609055 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150924
EP2609055 A1	20151030	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20150901 YEAR OF FEE PAYMENT : 5
EP2609055 A1	20151125	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
EP2609055 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150924
EP2609055 A1	20151130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150925
EP2609055 A1	20160129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT	COUNTRY OF REF DOCUMENT : PL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT

				INFORM. FROM NAT. OFFICE TO EPO	LAPSED DATE : 20150624
EP2609055 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IS NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151024
EP2609055 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20151026
EP2609055 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150624
EP2609055 A1	20160229	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20150825 YEAR OF FEE PAYMENT : 5
EP2609055 A1	20160329	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 502011007149 COUNTRY OF REF DOCUMENT : DE
EP2609055 A1	20160331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20160331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150824
EP2609055 A1	20160331	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2609055 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624

EP2609055 A1	20160429	LSLE	-PG25	NAT. OFFICE TO EPO LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150831
EP2609055 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150831
EP2609055 A1	20160601	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20160329
EP2609055 A1	20160601	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2609055 A1	20160729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150824
EP2609055 A1	20160824	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 6
EP2609055 A1	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160824 YEAR OF FEE PAYMENT : 6
EP2609055 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160824 YEAR OF FEE PAYMENT : 6
EP2609055 A1	20170328	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP2609055 A1	20170331	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20150624
EP2609055 A1	20170426	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	REF COUNTRY CODE : EP EFFECTIVE DATE : 20160824
EP2609055 A1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160825

EP2609055 B1	20150624	LSGT	+	granted / extensions (spc, cpc, pte)	
US2013112116 AA	20130509	LSPB	+	published / reissued	
US2013112116 AA	20130117	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BUERGE, CHRISTIAN; WOMBACHER, FRANZ; KURZ, CHRISTOPHE; AND OTHERS; SIGNING DATES FROM 20121212 TO 20121213; REEL/FRAME:029661/0144
US8608847 BB	20131217	LSGT	+	granted / extensions (spc, cpc, pte)	
US8608847 BB	20130117	LSAS	AS	ASSIGNMENT	OWNER NAME : SIKA TECHNOLOGY AG, SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BUERGE, CHRISTIAN; WOMBACHER, FRANZ; KURZ, CHRISTOPHE; AND OTHERS; SIGNING DATES FROM 20121212 TO 20121213; REEL/FRAME:029661/0144
US8608847 BB	20131126	LSGT	PAT1	Patented Case	
WO12025567 A1	20120301	LSPB	+	published / reissued	
WO12025567 A1	20130117	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13810843 COUNTRY OF REF DOCUMENT : US
WO12025567 A1	20130225	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: CEMENTITIOUS COMPOSITION AND ADMIXTURE

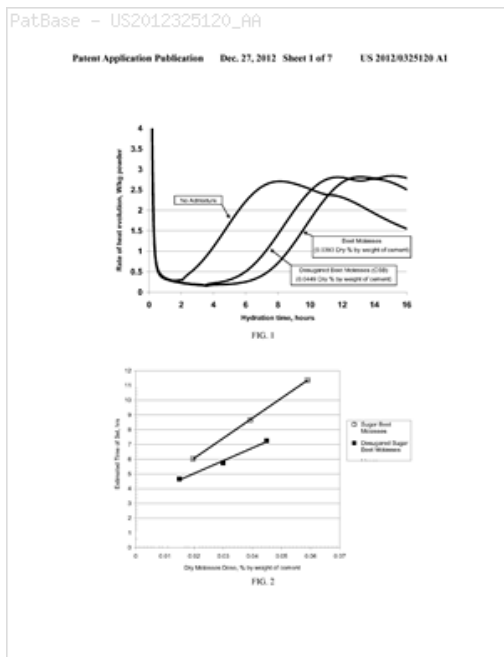
Abstract: Source: US2012325120A A cementitious composition including at least one cementitious and/or pozzolanic material and at least one desugared molasses. A method of preparing a cementitious composition including forming a mixture of water, at least one cementitious and/or pozzolanic material and at least one desugared molasses. An admixture for cementitious compositions including: (i) at least one desugared molasses; and (ii) at least one alkanolamine and/or at least one polyhydroxyalkylamine.

Classifications:

International (IPC 8-9): C04B14/10 C04B16/04 C04B18/06 C04B18/08 C04B18/14 C04B22/06 C04B24/00 C04B24/10 C04B24/12 C04B28/02 C04B40/00 C04B7/14 C04B7/26 (Advanced/Invention)
CPC: C04B2103/58 C04B2103/32 C04B24/122 C04B18/146 C04B2103/40 C04B14/106 C04B2103/24 C04B2103/10 C04B2103/34 C04B2103/12 C04B18/08 C04B2103/22 C04B2103/30 C04B40/00 C04B2103/14 C04B2103/20 C04B2103/0088 C04B18/141 C04B28/02 C04B40/0039 C04B24/10 C04B24/00 Y02W30/92 Y02W30/94 C04B7/26 C04B7/14

European: C04B24/10 C04B28/02 C04B40/00D4

US: 1/1 106/14.44 106/499 106/506 106/708 106/729 106/731 106/790 106/801 106/802 106/803 106/804 106/805 106/811 106/823



Family:

Publication number	Publication date	Application number	Application date
AU2012274110 AA	20121227	AU20120274110	20120621
BR112013033388 A2	20170124	BR20131133388	20120621
CA2839385 AA	20131213	CA20122839385	20120621
CN103635442 A	20140312	CN201280031298	20120621
EP2723694 A1	20140430	EP20120731365	20120621
IN00366CN2014 A	20140926	IN2014CN00366	20140116
JP2014520062 T2	20140821	JP20140516333T	20120621
MX2013015260 A1	20140227	MX20130015260	20120621
RU2014102107 A	20150810	RU20140102107	20120621
US2012325120 AA	20121227	US20120528903	20120621
US2013199416 AA	20130808	US20130836639	20130315
US2015068431 AA	20150312	US20140548415	20141120
US2015336847 AA	20151126	US20150819704	20150806
US8460460 BB	20130611	US20120528903	20120621
US8920556 BB	20141230	US20130836639	20130315
US9133059 BB	20150915	US20140548415	20141120
WO12175582 A1	20121227	WO2012EP61906	20120621

Priority:

US20110500873P 20110624 US20120528903 20120621 US20130836639 20130315
 WO2012EP61906 20120621 US20140548415 20141120 US20150819704 20150806

Probable Assignee: CONSTR RES AND TECH GMBH

Assignee(s): (std): CONSTANTINER DANIEL ; CONSTR RES AND TECH GMBH ; FARRINGTON STEPHEN A ; SHENDY SAMY M

Assignee(s): CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Inventor(s): (std): CONSTANTINER DANIEL ; FARRINGTON STEPHEN A ; SHENDY SAMY M

Inventor(s): SAMY M SHENDY ; DANIEL CONSTANTINER

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; GOWLING LAFLEUR HENDERSON LLP; CURATOLO SIDOTI CO LPA; JOSEPH G; VINCENT A

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2012274110 AA	20121227	LSPB	+	published / reissued	

AU2012274110 AA	20160714	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
BR112013033388 A2	20170124	LSPB	+	published / reissued	
BR112013033388 A2	20170418	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	
CA2839385 AA	20131213	LSPB	+	published / reissued	
CN103635442 A	20140312	LSPB	+	published / reissued	
CN103635442 A	20160817	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
EP2723694 A1	20140430	LSPB	+	published / reissued	
EP2723694 A1	20140430	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20140124
EP2723694 A1	20160601	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160105
IN00366CN2014 A	20140926	LSPB	+	published / reissued	
JP2014520062 T2	20140821	LSPB	+	published / reissued	
JP2014520062 T2	20150618	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20150618
JP2014520062 T2	20150731	LSWD	-A761	WRITTEN WITHDRAWAL OF APPLICATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A761 EFFECTIVE DATE : 20150731
MX2013015260 A1	20140227	LSPB	+	published / reissued	
MX2013015260 A1	20161207	LSGT	+FG	GRANT OR REGISTRATION	
RU2014102107 A	20150810	LSPB	+	published / reissued	
RU2014102107 A	20160510	LSWD	-FA92	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	EFFECTIVE DATE : 20160425
US2012325120 AA	20121227	LSPB	+	published / reissued	
US2013199416 AA	20130808	LSPB	+	published / reissued	
US2013199416 AA	20130531	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHENDY, SAMY M.; CONSTANTINER, DANIEL; REEL/FRAME:030527/0022 EFFECTIVE DATE : 20120817
US2015068431 AA	20150312	LSPB	+	published / reissued	
US2015068431 AA	20141204	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHENDY, SAMY M.; CONSTANTINER, DANIEL; REEL/FRAME:034376/0020 EFFECTIVE DATE : 20120817
US2015336847 AA	20151126	LSPB	+	published / reissued	
US2015336847 AA	20150814	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHENDY, SAMY M.; CONSTANTINER, DANIEL; REEL/FRAME:036326/0742 EFFECTIVE DATE : 20120817
US2015336847 AA	20161024	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	

US8460460 BB	20130611	LSGT	+	granted / extensions (spc, cpc, pte)	
US8460460 BB	20120822	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : CONSTRUCTION RESEARCH & TECHNOLOGY GMBH, GERMANY OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHENDY, SAMY M.; CONSTANTINER, DANIEL; REEL/FRAME:028830/0114 EFFECTIVE DATE : 20120817
US8460460 BB	20130522	LSGT	PAT1	Patented Case	
US8460460 BB	20161208	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8920556 BB	20141230	LSGT	+	granted / extensions (spc, cpc, pte)	
US8920556 BB	20141210	LSGT	PAT1	Patented Case	
US9133059 BB	20150915	LSGT	+	granted / extensions (spc, cpc, pte)	
US9133059 BB	20150826	LSGT	PAT1	Patented Case	
WO12175582 A1	20121227	LSPB	+	published / reissued	
WO12175582 A1	20131213	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2839385 COUNTRY OF REF DOCUMENT : CA
WO12175582 A1	20131224	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014516333 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO12175582 A1	20131224	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO12175582 A1	20140116	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2012274110 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20120621 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO12175582 A1	20140124	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2014102107 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO12175582 A1	20170124	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 11201303388 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 DESIGNATED STATE(S) : EFFECTIVE DATE : 20131224

Title: ALKALI-FREE LIQUID SETTING AND HARDENING ACCELERATOR FOR CEMENT

Abstract: A setting and hardening accelerator (I) is claimed, contg.: (a) calcium sulphate dihydrate; and (b) amorphous Al hydroxide and/or an amorphous and/or crystalline basic Al salt. Also claimed is a process for accelerating the setting and hardening of cement, or cement-based mortar or concrete, by adding 0.1-20 wt percent (I) (w.r.t. cement) to a cement-contg. mixt.

Classifications:

International (IPC 8-9): C04B40/00 (Advanced/Invention);
C04B40/00 (Core/Invention)

International (IPC 1-7): C04B22/00 C04B22/06 C04B22/08 C04B22/14 C04B28/02 C04B40/00

CPC: C04B2103/12 C04B2103/14 C04B2111/00146 C04B2111/1062 C04B40/0039 C04B2111/1025

European: C04B40/00D4 M04B111/10C

Family:

Publication number	Publication date	Application number	Application date
AT185540 E	19991015	AT19960106500T	19960425
DE59603322 D1	19991118	DE19965003322	19960425
DK0742179 T3	20000410	DK19960106500T	19960425
EP0742179 A1	19961113	EP19960106500	19960425
EP0742179 B1	19991013	EP19960106500	19960425
ES2139272 T3	20000201	ES19960106500T	19960425
GR3032188 T3	20000427	GR19990403274T	19991217
NO319145 B1	20050627	NO19960001799	19960503
NO961799 A	19961111	NO19960001799	19960503
NO961799 A0	19960503	NO19960001799	19960503
TR9600377 A1	19961121	TR19960000377	19960508
TR960992 A1	19961121	TR19960000377	19960508

Priority:

CH19950001341 19950509

Probable Assignee: SIKA SCHWEIZ AG

Assignee(s): (std): SIKA AG ; SIKA SCHWEIZ AG

Assignee(s): SIKA VORM KASPAR WINKLER AND CO AG ; SIKA AG VORM KASPAR WINKLER AND CO ; SIKA AG VORMALS KASPAR WINKLER AND CO ; SIKA AG WAS KASPAR WINKLER AND CO..

Inventor(s): (std): BOESCH KLEMENS ; BOSCH KLEMENS ; BUEGE THEODOR A ; BURGE THEODOR A ; KLEMENS BOSCH ; MAI DIETER

Inventor(s): THEODOR A BURGE ; THEODOR ABURGE ; DIETER MAI

Designated states: AT BE CH DE DK ES FR GB GR IT LI NL PT SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT185540 E	19991015	LSGT	+	granted / extensions (spc, cpc, pte)	
DE59603322 D1	20001102	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE59603322 D1	20021219	LSAS	8327	CHANGE IN THE PERSON/NAME/ADDRESS OF THE PATENT OWNER	OWNER NAME : SIKA SCHWEIZ AG, ZUERICH, CH
DK0742179 T3	20000410	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0742179 A1	19961113	LSPB	+	published / reissued	
EP0742179 A1	19970102	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19961104
EP0742179 A1	19980513	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19980327
EP0742179 A1	19991015	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP0742179 A1	20000201	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2139272 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 FORMAT OF REF DOCUMENT (F/P) : P
EP0742179 A1	20000927	LSGT	+26N	NO OPPOSITION FILED	
EP0742179 A1	20031031	LSAS	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PFA OWNER NAME : SIKA SCHWEIZ AG

					DESCRIPTION : SIKA AG, VORM. KASPAR WINKLER AND CO.#TUEFFENWIES 16-22#CH- 8048 ZUERICH (CH) - TRANSFER TO- SIKA SCHWEIZ AG#TUEFFENWIES 16-22#8064 ZUERICH (CH)
EP0742179 A1	20080731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DK PAYMENT DATE : 20080429 YEAR OF FEE PAYMENT : 13
EP0742179 A1	20080930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : BE PAYMENT DATE : 20080527 YEAR OF FEE PAYMENT : 13
EP0742179 A1	20081031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20080424 YEAR OF FEE PAYMENT : 13
EP0742179 A1	20090731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20090427 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20090429 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20090428 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090417 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20090401 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20090429 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20090407 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20091030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20090527 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20091031	LSLE	-BERE	BE: LAPSED	OWNER NAME : *SIKA A.G. VORM. KASPAR WINKLER AND CO. EFFECTIVE DATE : 20090430
EP0742179 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20090428 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20091130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090429 YEAR OF FEE PAYMENT : 14
EP0742179 A1	20091207	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DK REF LEGAL EVENT CODE : EBP
EP0742179 A1	20100104	LSLE	-NLV4	NL: LAPSED OR ANULLED DUE TO NON- PAYMENT OF THE ANNUAL FEE	EFFECTIVE DATE : 20091101
EP0742179 A1	20100226	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20091101
EP0742179 A1	20100430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20090430
EP0742179 A1	20100531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20090430

EP0742179 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20100426 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20100506 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20100730	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20100406 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20100428 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20100428 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20100831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20100401 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20101029	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20100413 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20100426 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20101130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20100428 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20101231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20100429 YEAR OF FEE PAYMENT : 15
EP0742179 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110427 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20110411 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20110425 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20110408 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20110429 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110504 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20110426 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110426 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20110401 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20110930	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20110426 YEAR OF FEE PAYMENT : 16
EP0742179 A1	20120731	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : CH PAYMENT DATE : 20120403 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20120430 YEAR OF FEE PAYMENT : 17

EP0742179 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GR PAYMENT DATE : 20120425 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20120608 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20120831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : SE PAYMENT DATE : 20120427 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20120928	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20120430 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20121231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20120702 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20121231	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20120530 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20130131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : PT PAYMENT DATE : 20120405 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20130329	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : AT PAYMENT DATE : 20120425 YEAR OF FEE PAYMENT : 17
EP0742179 A1	20131104	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : PT REF LEGAL EVENT CODE : MM4A DESCRIPTION : LAPSE DUE TO NON-PAYMENT OF FEES EFFECTIVE DATE : 20131025
EP0742179 A1	20131129	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0742179 A1	20131203	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP0742179 A1	20131215	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MM01 REF DOCUMENT NUMBER : 185540 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T EFFECTIVE DATE : 20130430
EP0742179 A1	20131225	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20130425
EP0742179 A1	20140114	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : ML REF DOCUMENT NUMBER : 990403274 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20131104
EP0742179 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130425
EP0742179 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130430
EP0742179 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : PT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131025
EP0742179 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130426

EP0742179 A1	20140131	LSLE	-PG25	EPO LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130430
EP0742179 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130430
EP0742179 A1	20140131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131101
EP0742179 A1	20140131	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20131231
EP0742179 A1	20140206	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 59603322 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20131101
EP0742179 A1	20140228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130425
EP0742179 A1	20140228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130430
EP0742179 A1	20140228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20131104
EP0742179 A1	20140611	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20140611
EP0742179 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20130426
EP0742179 B1	19991013	LSGT	+	granted / extensions (spc, cpc, pte)	REF DOCUMENT NUMBER : 742179 COUNTRY OF REF DOCUMENT : ES
ES2139272 T3	20000201	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2139272 T3	20000201	LSGT	+FG2A	DEFINITIVE PROTECTION	
GR3032188 T3	20000427	LSGT	+	granted / extensions (spc, cpc, pte)	
NO319145 B1	20050627	LSGT	+	granted / extensions (spc, cpc, pte)	
NO319145 B1	20131223	LSLE	-MM1K	LAPSED BY NOT PAYING THE ANNUAL FEES	
NO961799 A	19961111	LSPB	+	published / reissued	
TR9600377 A1	19961121	LSPB	+	published / reissued	
TR960992 A1	19961121	LSPB	+	published / reissued	

Title: METHOD FOR PRODUCTION OF ADDITIVE FOR PROMOTER OF HARDENING CONCRETE

Abstract: Source: RU2057735C

FIELD: building materials production. SUBSTANCE: method involves neutralization of waste solution of coke production. Said solution contains thiocyanate, sodium thiosulfate and sodium sulfate. Inhibitor of corrosion is added into mentioned above neutralized solution, its quantity being 1-10 g/l. Then mixing and drying at 200-300 C are carried out to prepare bulk product. EFFECT: improves efficiency of method, improves quality of desired product. 1 tbl

Classifications:

International (IPC 8-9): C04B18/04 C04B22/08 C04B24/18 C04B28/04 C04B40/00 (Advanced/Invention); C04B18/04 C04B22/00 C04B24/00 C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): C04B22/08 C04B24/18 C04B28/04

CPC: Y02W30/91 C04B18/0481 C04B40/0039 C04B2103/14 C04B2103/61 C04B2111/26

European: C04B18/04Z C04B40/00D4 M04B103/14 M04B103/61 M04B111/26

Способ по при- меру	Темпе- ратура сушки, °С	Дозировка катали- зингатора КИ-1, г/л (на сухое веще- ство)	Прочность при сжатии		Скорость коррозии, г/м ² ·ч	Z, %
1	2	3	4 через 1 ч после фор- мования	5 через 1 сут. норм. хран.	6	7
1	200	1	2,1	11,9	0,043	86
2	250	3	3,5	14,2	0,034	88,6
3	220	5	2,9	13,1	0,020	93,4

Family:

Publication number	Publication date	Application number	Application date
RU2057735 C1	19960410	RU19930031632	19930625
RU93031632 A	19961027	RU19930031632	19930625

Priority:

RU19930031632 19930625

Probable Assignee: LEVINA VALENTINA SEMENOVNA

Assignee(s): (std): LEVINA VALENTINA SEMENOVNA

Inventor(s): (std): OLEJNIKOV VLADIMIR V ; LITVINOV OLEG N ; LEVINA VALENTINA S ; GOSTEV YURIJ A

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
RU2057735 C1	19960410	LSGT	+	granted / extensions (spc, cpc, pte)	
RU93031632 A	19961027	LSPB	+	published / reissued	

Title: HARDENING ACCELERATOR FOR CEMENT

Abstract: A setting and hardening accelerator (I) contains an aluminium salt, which also contains (a) amorphous silica and (b) an inorganic and/or organic thixotropic agent and/or an organic carbonate ester. Also claimed is a process for setting and hardening cement, or mortar or concrete made from cement, by adding 0.1-20 wt percent (I) to a cement-containing mixture.

Classifications:

International (IPC 8-9): C04B28/02 C04B40/00 (Advanced/Invention);
C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): C04B103/12 C04B103/14 C04B18/14 C04B22/00 C04B22/08 C04B22/14 C04B24/04 C04B28/02

CPC: Y02W30/94 C04B28/02 C04B40/0039 C04B2103/0021 C04B2103/12 C04B2103/14 C04B2111/00146

European: C04B28/02 C04B40/00D4 M04B103/00C30 M04B103/12 M04B103/14 M04B111/00M16

Family:

Publication number	Publication date	Application number	Application date
EP0858981 A1	19980819	EP19980100377	19980112
NO980482 A	19980817	NO19980000482	19980204
NO980482 A0	19980204	NO19980000482	19980204

Priority:

CH19970000342 19970214

Probable Assignee: SIKA AG

Assignee(s): (std): SIKA AG

Assignee(s): SIKA AG VORM KASPAR WINKLER AND CO ; SIKA VORM KASPAR WINKLER AND CO AG

Inventor(s): (std): BUERGE THEODOR A ; MAI DIETER ; PERAY KURT ; PURAY KURT

Designated states: AT BE CH DE DK ES FI FR GB GR IE IT LI NL PT SE

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP0858981 A1	19980819	LSPB	+	published / reissued	
EP0858981 A1	19990303	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19981223
EP0858981 A1	19990506	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESCRIPTION : AT BE CH DE DK ES FI FR GB GR IE IT LI NL PT SE
EP0858981 A1	20000308	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20000120
EP0858981 A1	20001206	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20000531
NO980482 A	19980817	LSPB	+	published / reissued	
NO980482 A	20051010	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	

Abstract: Source: JP7165449A PURPOSE:To obtain a setting-accelerating granulated blast-furnace slag powder capable of effectively accelerating the setting of Portland cement, etc., and producible at a low cost and to provide a process for the production of the slag powder. CONSTITUTION:This setting-accelerating granulated blast-furnace slag powder exhibiting setting acceleration effect when used together with cement settable by the dissolution of calcium ion can be produced by adding granulated blast-furnace slag powder having a fineness corresponding to the specific surface area of 2,000-6,000cm²/g or thereabout to an alkaline aqueous solution to effect the dissolution of alumina component from the slag powder, dispersing the slag powder in an aqueous solution of a calcium aluminate compound, drying the dispersion to fill the calcium aluminate compound in the recess on the surface of the slag powder formed by the dissolution of the alumina component and compounding the treated granulated blast-furnace slag powder with gypsum.

International (IPC 8-9): C04B18/14 C04B20/10 C04B22/08
C04B22/14 C04B28/04 C04B40/00 (Advanced/Invention);
C04B103/12 (Advanced/Non-invention);
C04B18/04 C04B20/00 C04B22/00 C04B28/00
C04B40/00 (Core/Invention)

CPC: Y02W30/94 C04B18/142 C04B40/0039 C04B2103/12
European: C04B18/14B2 C04B40/00D4 M04B103/12



Publication number	Publication date	Application number	Application date
JP3377582 B2	20030217	JP19930340936	19931210
JP7165449 A2	19950627	JP19930340936	19931210

JP19930340936 19931210

Probable Assignee: KOKAN MINING CO LTD

Assignee(s): (std): KOKAN MINING CO LTD ; TSUYUKI HISAMITSU

Assignee(s): KOKAN KOGYO KK

Inventor(s): (std): HARADA MINORU ; SUZUKI SATOSHI ; TAKANO AKIRA ; TSUYUKI HISAMITSU ; YOSHIZAWA CHIAKI

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
JP3377582 B2	20030217	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3377582 B2	20050802	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
JP3377582 B2	20061206	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP7165449 A2	19950627	LSPB	+	published / reissued	

Title: CEMENT ADMIXTURE AND CEMENT COMPOSITION

Abstract: Source: JP8059319A PURPOSE: To improve strength revealing property at a low temp. by incorporating anhydrous gypsum, aluminum sulfate, an aluminate and nitrates. CONSTITUTION: A cement admixture is obtained by mixing 100 parts by weight anhydrous gypsum having greater than or equal to 2500cm²/g particle size by blaine value, 20-150 parts by weight aluminum sulfate expressed in terms of anhydride, 5-15 parts by weight aluminate and 20-150 parts by weight nitrates. In a blended material obtained by blending 2-10 parts by weight cement admixture to 100 parts by weight cement, 25-100 weight percent water is added to use for mortar or concrete.

Classifications:

International (IPC 8-9): C04B22/08 C04B22/14 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention); C04B103/14 (Advanced/Non-invention);

C04B22/00 C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): C04B103/14 C04B103/30 C04B111/20 C04B111/32 C04B14/06 C04B22/08 C04B22/14 C04B24/00 C04B28/02 C04B28/04

CPC: C04B28/04 C04B40/0039

European: C04B28/04 C04B40/00D4

Family:

Publication number	Publication date	Application number	Application date
JP3549579 B2	20040804	JP19940189698	19940811
JP8059319 A2	19960305	JP19940189698	19940811

Priority:

JP19940189698 19940811

Probable Assignee: DENKI KAGAKU KOGYO KK

Assignee(s): (std): DENKI KAGAKU KOGYO KK

Assignee(s): DENKI KAGAKU KOGYO KABUSHIKI KAISHA

Inventor(s): (std): KIDA TSUTOMU ; MIHARA TOSHIO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
JP3549579 B2	20040804	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3549579 B2	20040413	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP3549579 B2	20040421	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20040420
JP3549579 B2	20040430	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20040421
JP3549579 B2	20040430	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP3549579 B2	20060411	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R350
JP3549579 B2	20080403	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20080430 YEAR OF FEE PAYMENT : 4
JP3549579 B2	20080415	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20090430 YEAR OF FEE PAYMENT : 5
JP3549579 B2	20090331	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100430 YEAR OF FEE PAYMENT : 6
JP3549579 B2	20100427	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110430

					YEAR OF FEE PAYMENT : 7
JP3549579 B2	20120327	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130430 YEAR OF FEE PAYMENT : 9
JP3549579 B2	20130430	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP8059319 A2	19960305	LSPB	+	published / reissued	

Title: CEMENT ADMIXTURE AND CEMENT COMPOSITION

Abstract: Source: JP8301642A PURPOSE: To improve the manifestation of strength of cement.concrete by admixing anhydrous gypsum and a specific acid to the cement composition. CONSTITUTION: This cement admixture is obtained by using 50-95 parts by weight of anhydrous gypsum with a Blaine value of greater than or equal to3000cm<2> /g and 5-50 parts by weight of one or two or more selected from formic, acetic, and lactic acids, as necessary, 20-70 parts by weight of silica fine powder with a Blaine value of greater than or equal to4,000cm<2> /g, totaling to 100 parts by weight The cement admixture is formulated to 100 parts by weight of cement in an amount of 2-20 parts by weight to give the cement composition.

Classifications:

International (IPC 8-9): C04B11/06 C04B22/06 C04B22/14 C04B24/04 C04B24/06 C04B28/02 C04B28/04 C04B40/00 C09K17/02 C09K17/06 C09K17/10 (Advanced/Invention); C04B103/12 C09K103/00 (Advanced/Non-invention); C04B11/00 C04B22/00 C04B24/00 C04B28/00 C04B40/00 C09K17/02 (Core/Invention)

International (IPC 1-7): C04B103/12 C04B111/00 C04B14/02 C04B22/06 C04B22/14 C04B24/04 C04B24/06 C04B28/02 C09K103/00 C09K17/02 C09K17/06 C09K17/10

CPC: C04B11/06 C04B28/04 C04B40/0039

European: C04B11/06 C04B28/04 C04B40/00D4

実験 No.	無水 セッコウ	ギ酸類 A	圧 縮 強 度		備 考
			7 日	2 8 日	
1- 1	1 0 0	0	7 2 0	8 1 4	比較例
1- 2	9 5	5	8 0 1	9 2 7	実施例
1- 3	9 0	1 0	8 0 4	9 3 9	実施例
1- 4	8 0	2 0	8 3 2	9 5 2	実施例
1- 5	7 5	2 5	8 5 0	9 8 1	実施例
1- 6	7 0	3 0	8 3 9	9 7 0	実施例
1- 7	5 0	5 0	8 0 8	9 4 8	実施例
1- 8	0	1 0 0	6 7 3	7 5 5	比較例

無水セッコウとギ酸類 a は(重量部)、圧縮強度は(kgf/cm²)

Family:

Publication number	Publication date	Application number	Application date
JP3365699 B2	20030114	JP19950110794	19950509
JP8301642 A2	19961119	JP19950110794	19950509

Priority:

JP19950110794 19950509

Probable Assignee: DENKI KAGAKU KOGYO KK
Assignee(s): (std): DENKI KAGAKU KOGYO KK
Assignee(s): DENKI KAGAKU KOGYO KABUSHIKI KAISHA
Inventor(s): (std): HOKARI TAMOTSU ; MORIOKA MINORU

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
JP3365699 B2	20030114	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3365699 B2	20060411	LSAS	R350	WRITTEN NOTIFICATION OF REGISTRATION OF TRANSFER	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R350
JP3365699 B2	20071113	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20081101 YEAR OF FEE PAYMENT : 6
JP3365699 B2	20081111	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20091101 YEAR OF FEE PAYMENT : 7
JP3365699 B2	20091110	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20101101 YEAR OF FEE PAYMENT : 8
JP3365699 B2	20100928	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20111101 YEAR OF FEE PAYMENT : 9
JP3365699 B2	20111004	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20121101 YEAR OF FEE PAYMENT : 10

JP3365699 B2	20121016	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20131101 YEAR OF FEE PAYMENT : 11
JP3365699 B2	20150509	LSLE	-EXPY	CANCELLATION BECAUSE OF COMPLETION OF TERM	
JP8301642 A2	19961119	LSPB	+	published / reissued	

Title: Method of accelerated hardening and strength-increasing of different cements

Abstract: Source: US4134773A A method for accelerating the hardening and increasing the strength of cements, including cement pastes, cement-sand mortars and concretes, which comprises mixing the cements with water plus an admixture at a temperature up to 60 degrees C., and thereafter allowing the mixture to harden at a temperature up to 100 degrees C. The admixture used comprises bialuminium pentahydroxychloride, gypsum, lime and alkali or alkaline earth nitrite.

Classifications:

International (IPC 8-9): C04B22/12 C04B22/14 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention); C04B22/00 C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): C04B11/10 C04B13/00 C04B13/02 C04B13/20 C04B13/22 C04B13/26 C04B15/00 C04B7/00 C04B7/12 C04B7/14 C04B7/34 C04B7/35 C04B7/36

CPC: C04B22/12 C04B28/02 C04B28/04 C04B40/0039

European: C04B22/12 C04B28/02 C04B28/04 C04B40/00D4

US: 106/782 106/787 106/89

Family:

Publication number	Publication date	Application number	Application date
BG24579 T	19780412	BG19770035651	19770311
BG24997 T	19780712	BG19770035650	19770311
CA1090838 A1	19801202	CA19770290939	19771115
DD130028 Z	19780301	DD19770199483	19770614
DD130029 Z	19780301	DD19770199487	19770614
DE2727025 A1	19780914	DE19772727025	19770615
DE2727026 A1	19781019	DE19772727026	19770615
DK267277 A	19780912	DK19770002672	19770616
DK267377 A	19780912	DK19770002673	19770616
ES464095 A1	19781116	ES19770464095	19771112
FI58481 B	19801031	FI19770001852	19770613
FI58481 C	19810210	FI19770001852	19770613
FI58482 B	19801031	FI19770001853	19770613
FI58482 C	19810210	FI19770001853	19770613
FI771852 A	19780912	FI19770001852	19770613
FI771853 A	19780912	FI19770001853	19770613
FR2383141 A1	19781006	FR19780005394	19780224
GB1573236 A	19800820	GB19770043374	19771018
IS2414 A7	19771207	IS19770002414	19771027
IT1116140 A	19860210	IT19770051562	19771026
JP53112925 A2	19781002	JP19770090961	19770730
JP53112926 A2	19781002	JP19770090962	19770730
NO144564 B	19810615	NO19770002384	19770705
NO144564 C	19810923	NO19770002384	19770705
NO144565 B	19810615	NO19770002383	19770705
NO144565 C	19810923	NO19770002383	19770705
NO772383 A	19780912	NO19770002383	19770705
NO772384 A	19780912	NO19770002384	19770705
SE421911 B	19820208	SE19770006819	19770613
SE421911 C	19820617	SE19770006819	19770613
SE421912 B	19820208	SE19770006818	19770613
SE421912 C	19820527	SE19770006818	19770613
SE7706818 A	19780912	SE19770006818D	19770613
SE7706819 A	19780912	SE19770006819D	19770613
US4134773 A	19790116	US19770839044	19771003
YU261877 A	19830121	YU19770002618	19771101
YU43964 B	19900228	YU19770002618	19771101

Priority:

BG19770035650 19770311 BG19770035651 19770311 CA19770290939 19771115

Probable Assignee: TS LABORATORIA PO PHYSIKO CHIM

Assignee(s): (std): CENT LAB PHYS CHEM MECHANIKA ; CENTRALINA LAB ; TS LAB PHYSIKO KHIM MECHANIKA ; TS LAB ; TS LAB PHYSIKOCHIMICHESKA MECH ; TS LAB PHYSIKO CHIMICHESKA M ; TS LABORATORIA PO PHYSIKO CHIM ; TS LAB PHYSIKO CHEMICHESKA MEC ; TS LAB PHYSIK CHI ; SENTORARUNA LAB FUIIJKOOSHIMIC ; DZHABAROV ; SIMEONOV ; DZABAROV

Assignee(s): DZHABAROV NIKOLA B ; ZENTRALNA LABORATORIA PO PHYSIKO CHIMITSCHESKA MECHANIKA ; CENTRALNA LABORATORIA PO PHYSIKOCHIMICHESKA MECHANIKA ; SIMEONOV YORDAN T ; DJABAROV NIKOLA B ; ZENTRALNA LABORATORIA PO PHYSIKO CHIMITSCHESKA MECHANIKA BG ; DZABAROV NIKOLA B ; SIMEONOV IORDAN T ; CENTRALINA LABORATORIA ; CENTRALNA LABORATORIA ; CENTRALNA LABORATORIA PHYSIK CHI ; CENTRALNA LABORATORIA PO PHYSIKO CHEMICHESKA MECHANIKA ; CENTRALNA LABORATORIA PO PHYSIKO CHIMICHESKA M ; CENTRALNA LABORATORIA PO PHYSIKO CHIMICHESKA MECHANIKA ; CENTRALNA LABORATORIA PO PHYSIKO CHIMICHESKA MECHANIKA PRI BAN

Inventor(s): (std): DJABAROV NIKOLA BORISSOV ; DJABAROV NIKOLA BORISSOV DIPL ; DJABAROV N B ; DZABAROV ; DZHABAROV ; DJABAROV N B ; DJABAROV NIKOLA B ; NIKOLA BORISSOV DJABAROV ; NIKORA BORISOFU DOJYABAROFU ; SIMENOV YORDAN TODOROV ; SIMEONOV ; SIMEONOV JORDAN T ; SIMEONOV JORDAN TODOROV PROF D ; SIMEONOV PROF YORDAN TODOROV ; SIMEONOV Y T ; SIMEONOV YORDAN T ; YOODAN TODOROFU SHIMEONOFU ; YORDAN TODOROV SIMEONOV ; SIMEONOV YORDAN TODOROV

Inventor(s): YORDAN TODOROV SIMENOV ET NIKOLA BORISSOV DJABAROV ; TODOROV PROF DIPL ING SIMEONOV JORDAN ; TODOROV PROF DIPL ING SIMEONOV JORDAN ; Y T SIMEONOV ; BORISSOV DIPL ING DJABAROV NIKOLA ; SIMEONOV JORDAN T BG ; SIMEONOV IORDAN T ; PROF YORDAN TODOROV SIMEONOV ; DJABAROV NIKOLA B BG ; DZHABAROV NIKOLA B ; N B DJABAROV ; N B DJABAROV ; DZABAROV NIKOLA B

Agent(s): ROBIC ROBIC AND ASSOCIES ASSOCIATES

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
BG24579 T	19780412	LSGT	+	granted / extensions (spc, cpc, pte)	
BG24997 T	19780712	LSGT	+	granted / extensions (spc, cpc, pte)	
CA1090838 A1	19801202	LSPB	+	published / reissued	
CA1090838 A1	19971202	LSLE	-MKEX	EXPIRY	
DD130028 Z	19780301	LSPB	+	published / reissued	
DD130029 Z	19780301	LSPB	+	published / reissued	
DE2727025 A1	19780914	LSPB	+	published / reissued	
DE2727025 A1	19780914	LSES	+OAM	SEARCH REPORT AVAILABLE	
DE2727025 A1	19781116	LSES	+OC	SEARCH REPORT AVAILABLE	
DE2727025 A1	19840426	LSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE2727025 A1	19861211	LSLE	-8139	DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE	
DE2727026 A1	19781019	LSPB	+	published / reissued	
DE2727026 A1	19781019	LSES	+OAM	SEARCH REPORT AVAILABLE	
DE2727026 A1	19781130	LSES	+OC	SEARCH REPORT AVAILABLE	
DE2727026 A1	19840419	LSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE2727026 A1	19860612	LSLE	-8139	DISPOSAL/NON-PAYMENT OF THE ANNUAL FEE	
DK267277 A	19780912	LSPB	+	published / reissued	
DK267377 A	19780912	LSPB	+	published / reissued	
FI58481 B	19801031	LSPB	+	published / reissued	
FI58481 B	20040831	LSLE	-MM	PATENT LAPSED	OWNER NAME : CENTRALNA LABORATORIA PO PHYSIKO-
FI58481 C	19810210	LSGT	+	granted / extensions (spc, cpc, pte)	
FI58482 B	19801031	LSPB	+	published / reissued	
FI58482 B	20040831	LSLE	-MM	PATENT LAPSED	OWNER NAME : CENTRALNA LABORATORIA PO PHYSIKO-
FI58482 C	19810210	LSGT	+	granted / extensions (spc, cpc, pte)	
FI771852 A	19780912	LSPB	+	published / reissued	
FI771853 A	19780912	LSPB	+	published / reissued	
FR2383141 A1	19781006	LSPB	+	published / reissued	
FR2383141 A1	19851220	LSLE	-ST	NOTIFICATION OF LAPSE	
GB1573236 A	19800820	LSGT	+	granted / extensions (spc, cpc, pte)	
GB1573236 A	19801112	LSGT	+PS	PATENT SEALED	
GB1573236 A	19860618	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	
IS2414 A7	19771207	LSPB	+	published / reissued	
IT1116140 A	19860210	LSGT	+	granted / extensions (spc, cpc, pte)	
JP53112925 A2	19781002	LSPB	+	published / reissued	
JP53112926 A2	19781002	LSPB	+	published / reissued	
NO144564 B	19810615	LSPB	+	published / reissued	
NO144564 C	19810923	LSGT	+	granted / extensions (spc, cpc, pte)	
NO144565 B	19810615	LSPB	+	published / reissued	
NO144565 C	19810923	LSGT	+	granted / extensions (spc, cpc, pte)	
NO772383 A	19780912	LSPB	+	published / reissued	

NO772384 A	19780912	LSPB	+	published / reissued
SE421911 B	19820208	LSPB	+	published / reissued
SE421911 C	19820617	LSGT	+	granted / extensions (spc, cpc, pte)
SE421912 B	19820208	LSPB	+	published / reissued
SE421912 C	19820527	LSGT	+	granted / extensions (spc, cpc, pte)
SE7706818 A	19780912	LSPB	+	published / reissued
SE7706819 A	19780912	LSPB	+	published / reissued
US4134773 A	19790116	LSGT	+	granted / extensions (spc, cpc, pte)
YU261877 A	19830121	LSPB	+	published / reissued
YU43964 B	19900228	LSPB	+	published / reissued

Title: Cementitious compositions and methods for use in subterranean wells

Abstract: Source: US5749418A A cementitious composition is provided comprising a hydraulic cementitious material, iron chloride and sufficient water to form a pumpable slurry. The iron chloride predictably enhances the rheology and performance of the composition. Methods of cementing subterranean wells are accomplished by mixing together the hydraulic cementitious material, iron chloride and sufficient water to form a pumpable slurry; pumping the slurry to a selected location within the wellbore; and then allowing the slurry to solidify within the well.

Classifications:

International (ipc 8-9): C04B14/06 C04B22/12 C04B24/06 C04B24/16 C04B24/30 C04B24/38 C04B24/42 C04B28/02 C04B28/04 C04B40/00 C04B7/06 C09K8/02 C09K8/46 E21B33/00 E21B33/13 E21B33/14 (Advanced/Invention); C04B22/00 C04B28/00 C04B40/00 C04B7/00 C09K8/42 E21B33/13 (Core/Invention)

International (ipc 1-7): 14 22 24 C04B14/06 C04B21/12 C04B22/12 C04B22/14 C04B24/00 C04B24/04 C04B24/06 C04B24/16 C04B24/30 C04B24/38 C04B24/42 C04B28/02 C04B28/02,1 C04B28/02,14 C04B28/02,2 C04B28/02,22 C04B28/02,24 C04B28/02,7 C04B40/00 C04B7/00 C04B7/02 C04B7/06 C09K7/00 E21B33/00 E21B33/13 E21B33/14 E21B35/13

CPC: Y02W30/94 C04B28/04 C04B22/12 C04B40/0039 C09K8/46

European: C04B22/12 C04B28/04 C04B40/00D4 C09K8/46

US: 106/724 106/725 106/726 106/728 106/730 106/734 106/736 106/802 106/805 106/806 106/809 106/810 106/815 106/816 166/292 166/293

Family:

Publication number	Publication date	Application number	Application date
AR012005 AA	20000913	AR1998P101705	19980414
AR014490 AA	20010228	AR1999P100301	19990126
AR022681 AB	20020904	AR1999P105186	19991013
AU199869270 A1	19981111	AU19980069270	19980403
AU199922878 A1	19990809	AU19990022878	19990125
CA2287473 AA	19991014	CA19982287473	19980403
CA2287473 C	20040706	CA19982287473	19980403
CA2319179 AA	20000720	CA19992319179	19990125
CA2319179 C	20061219	CA19992319179	19990125
CN1095810 C	20021211	CN19988004184	19980403
CN1195699 C	20050406	CN19998003313	19990125
CN1257465 A	20000621	CN19988004184	19980403
CN1291964 A	20010418	CN19998003313	19990125
CN1328205 C	20070725	CN20021022774	19990125
CN1495146 A	20040512	CN20021022774	19990125
CO5021176 A1	20010327	CO19980019990	19980413
DE69802790 D1	20020117	DE19986002790	19980403
DE69802790 T2	20020523	DE19986002790T	19980403
DE69915803 D1	20040429	DE19996015803	19990125
DE69915803 T2	20040812	DE19996015803T	19990125
EP0973698 A1	20000126	EP19980914973	19980403
EP0973698 B1	20011205	EP19980914973	19980403
EP1051368 A1	20001115	EP19990902663	19990125
EP1051368 B1	20040324	EP19990902663	19990125
HK1022295 A1	20020328	HK20000100925	20000216
ID23807 A	20000511	ID19990001385	19980403
ID26337 A	20001214	ID20000001649	19990125
IN00115MN2004 A	20050429	IN2004MN00115	20040216
IN00893DE1998 A	20091030	IN1998DE00893	19980406
IN01027DE2005 A	20160506	IN2005DE01027	20050426
MY117956 A	20040830	MY19980001636	19980413
NO20003806 A	20000925	NO20000003806	20000725
NO20003806 A0	20000725	NO20000003806	20000725
NO324879 B1	20071227	NO19990004952	19991011
NO994952 A	19991011	NO19990004952	19991011
NO994952 A0	19991011	NO19990004952	19991011
PE02322000 A1	20000329	PE19990000058	19990126
PE85199 A1	19990920	PE19980000275	19980414
TH10121 B	20010123	TH19981001270	19980410
TH33461 A	19990624	TH19981001270	19980410
TW396204 B	20000701	TW19980105628	19980610
TW427960 B	20010401	TW19990101166	19990126
US5749418 A	19980512	US19970834065	19970414
US5968255 A	19991019	US19990228846	19990112
US5972103 A	19991026	US19980013791	19980126
WO9846542 A1	19981022	WO1998GB00996	19980403
WO9937594 A1	19990729	WO1999GB00247	19990125

Priority:

IN1998DE00893	19980406	US19970834065	19970414	WO1998GB00996	19980403
US19980013791	19980106	US19980013791	19980126	US19990228846	19990112
WO1999GB00247	19990125	WO1999GB00247	19990125		

Probable Assignee: HALLIBURTON ENERGY SERVICES INC

Assignee(s): (std): CONOCOPHILLIPS CO ; ATLANTIC RICHFIELD CO ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; PHILLIPS PETROLEUM CO ; WAIN CHRISTOPHER PAUL ; REBS ALEXANDER A

Assignee(s): HALLIBURTON ENERGY SERVICES INC CS ; HALLIBURTON ENERGY SERVICES INC ATLANTIC RICHFIELD COMPANY ; MEHTA SUDHIR ; MORGAN RICKEY L ; JONES RICHARD R ; PHILLIPS PETROLEUM COMPANY ; HALLIBURTON ENERGY SERVICES ; PHILLIPS PETROLEUM CO 234 PATENT AND LIBRARY ; ATLANTIC RICHFIELD CO LOS ANGELES ; ATLANTIC RICHFIELD COMPANY ;

Inventor(s): (std): CONOCOPHILLIPS COMPANY ; CONOCOPHILLIPS CO BARTLESVILLE ; CAVENY WILLIAM J ; GRAY DENNIS W ; CHATTERJI JITEN

Inventor(s): S MEIHETA WJ KAFNI RR JEANS ; R R JEANS ; W J KAFNI ; CAVENY J ; MORGAN RICKEY LYNN ; S MEIHETA W J KAFNI R R JEANS ; MORGAN L ; JONES R ; GRAY DENNIS WILLIE ; GRAY W ; CAVENY WILLIAM JAMES

Agent(s): OGILVY RENAULT LLP SENCRL SRL; HUMBERTO RUBIO CAMACHO

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CY CZ DE DK EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT UA UG UZ VN YU ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR012005 AA	20000913	LSPB	+	published / reissued	
AR012005 AA	20050608	LSGT	+FG	GRANT, REGISTRATION	
AR014490 AA	20010228	LSPB	+	published / reissued	
AR014490 AA	20040610	LSGT	+FG	GRANT, REGISTRATION	
AR022681 AB	20020904	LSGT	+	granted / extensions (spc, cpc, pte)	
AR022681 AB	20050729	LSGT	+FG	GRANT, REGISTRATION	
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CA2287473 AA	20110516	LSLE	-MKLA	LAPSED	
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CA2319179 C	20061219	LSGT	+	granted / extensions (spc, cpc, pte)	
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CN1095810 C	20000621	LSPB	+C06	PUBLICATION	

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CN1095810 C	20050504	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	OWNER NAME : HALLIBURTON ENERGY RESOURCES SERVICE CORPORATION DESCRIPTION : FORMER OWNER: ATLANTIC RICHFIELD CO.,LTD. EFFECTIVE DATE : 20050401
CN1095810 C	20050504	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	OWNER NAME : PHILLIPS PETROLEUM COMPANY DESCRIPTION : FORMER OWNER: HALLIBURTON ENERGY RESOURCES SERVICE CORPORATION
CN1095810 C	20050504	LSAS	C41	TRANSFER OF PATENT APPLICATION OR PATENT RIGHT OR UTILITY MODEL	
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CN1195699 C	20050511	LSAS	ASS	SUCCESSION OR ASSIGNMENT OF PATENT RIGHT	OWNER NAME : HALLIBURTON ENERGY RESOURCES SERVICE CORPORATION DESCRIPTION : FORMER OWNER: ATLANTIC RICHFIELD CO.,LTD. EFFECTIVE DATE : 20050401
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CN1328205 C	20070725	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
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EP0973698 A1	20010516	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20010403
EP0973698 A1	20020807	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC.
EP0973698 A1	20020807	LSAS	RAP2	TRANSFER OF RIGHTS OF AN EP GRANTED PATENT	OWNER NAME : PHILLIPS PETROLEUM COMPANY
EP0973698 A1	20021127	LSGT	+26N	NO OPPOSITION FILED	
EP0973698 A1	20090630	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20090312 YEAR OF FEE PAYMENT : 12
EP0973698 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20090406 YEAR OF FEE PAYMENT : 12
EP0973698 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20090418 YEAR OF FEE PAYMENT : 12
EP0973698 A1	20090831	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : NL PAYMENT DATE : 20090409 YEAR OF FEE PAYMENT : 12
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EP0973698 A1	20101110	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : V1 EFFECTIVE DATE : 20101101
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EP0973698 A1	20110121	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20101230
EP0973698 A1	20110131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20101101
EP0973698 A1	20110228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20101103
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EP0973698 A1	20120731	LSLE	-PG25		LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20100430
EP0973698 B1	20011205	LSGT	+		granted / extensions (spc, cpc, pte)	
EP1051368 A1	20001115	LSPB	+		published / reissued	
EP1051368 A1	20001115	LSSES	+17P		REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20000818
EP1051368 A1	20010124	LSSES	+17Q		FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20001208
EP1051368 A1	20020807	LSAS	RAP1		TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC.
EP1051368 A1	20020807	LSAS	RAP1		TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : PHILLIPS PETROLEUM COMPANY
EP1051368 A1	20030618	LSAS	RAP1		TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : HALLIBURTON ENERGY SERVICES, INC.
EP1051368 A1	20030618	LSAS	RAP1		TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : CONOCOPHILLIPS COMPANY
EP1051368 A1	20040324	LSGT	REG		REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
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HK1022295 A1	20020328	LSGT	+	granted / extensions (spc, cpc, pte)	
HK1022295 A1	20041215	LSFE	+PF	PATENT IN FORCE	
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ID26337 A	20001214	LSPB	+	published / reissued	
IN00115MN2004 A	20050429	LSPB	+	published / reissued	
IN00893DE1998 A	20091030	LSPB	+	published / reissued	
IN01027DE2005 A	20160506	LSPB	+	published / reissued	
MY117956 A	20040830	LSGT	+	granted / extensions (spc, cpc, pte)	
NO20003806 A	20000925	LSPB	+	published / reissued	
NO20003806 A	20090831	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT APPLICATION	
NO324879 B1	20071227	LSGT	+	granted / extensions (spc, cpc, pte)	
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NO994952 A	19991011	LSPB	+	published / reissued	
PE02322000 A1	20000329	LSPB	+	published / reissued	
PE85199 A1	19990920	LSPB	+	published / reissued	
TH10121 B	20010123	LSGT	+	granted / extensions (spc, cpc, pte)	
TH33461 A	19990624	LSPB	+	published / reissued	

TW396204 B	20000701	LSGT	+	granted / extensions (spc, cpc, pte)		
TW396204 B	20001025	LSGT	+GD4A	ISSUE OF PATENT CERTIFICATE FOR GRANTED INVENTION PATENT		
TW396204 B	20110401	LSLE	-MM4A	ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES		
TW427960 B	20010401	LSGT	+	granted / extensions (spc, cpc, pte)		
TW427960 B	20010718	LSGT	+GD4A	ISSUE OF PATENT CERTIFICATE FOR GRANTED INVENTION PATENT		
US5749418 A	19980512	LSGT	+	granted / extensions (spc, cpc, pte)		
US5749418 A	19970922	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:CAVENY, WILLIAM J.; REEL/FRAME:008712/0672 EFFECTIVE DATE : 19970916	
US5749418 A	19970925	LSAS	AS	ASSIGNMENT	OWNER NAME : ATLANTIC RICHFIELD COMPANY, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MEHTA, SUDHIR; REEL/FRAME:008724/0903 EFFECTIVE DATE : 19970410	
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US5749418 A	20020430	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ATLANTIC RICHFIELD COMPANY; HALLIBURTON ENERGY SERVICES, INC.; REEL/FRAME:012852/0930 EFFECTIVE DATE : 20020314	
US5749418 A	20020430	LSAS	AS	ASSIGNMENT	OWNER NAME : PHILLIPS PETROLEUM COMPANY, OKLAHOMA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ATLANTIC RICHFIELD COMPANY; HALLIBURTON ENERGY SERVICES, INC.; REEL/FRAME:012852/0930 EFFECTIVE DATE : 20020314	
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US5749418 A	20090928	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12	
US5968255 A	19991019	LSGT	+	granted / extensions (spc, cpc, pte)		
US5968255 A	19990112	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CAVENY, WILLIAM J.; MORGAN, RICKEY L.; GRAY, DENNIS W.; AND OTHERS; REEL/FRAME:009699/0420; SIGNING DATES FROM 19990108 TO 19990111	
US5968255 A	19990610	LSAS	AS	ASSIGNMENT	OWNER NAME : ATLANTIC RICHFIELD COMPANY, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MEHTA, SUDHIR; JONES, RICHARD R.; REEL/FRAME:010014/0836 EFFECTIVE DATE : 19990107	
US5968255 A	20020430	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS	

					DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ATLANTIC RICHFIELD COMPANY; HALLIBURTON ENERGY SERVICES, INC.; REEL/FRAME:012852/0930 EFFECTIVE DATE : 20020314
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US5968255 A	20070320	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5968255 A	20110323	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5972103 A	19991026	LSGT	+	granted / extensions (spc, cpc, pte)	
US5972103 A	19980427	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CAVENY, WILLIAM J.; MORGAN, RICKEY L.; GRAY, DENNIS W.; ANDOTHERS; REEL/FRAME:009205/0222; SIGNING DATES FROM 19980423 TO 19980424
US5972103 A	19980501	LSAS	AS	ASSIGNMENT	OWNER NAME : ATLANTIC RICHFIELD COMPANY, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MEHTA, SUDHIR; JONES, RICHARD B.; REEL/FRAME:009204/0563 EFFECTIVE DATE : 19980119
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US5972103 A	20031223	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20031026
WO9846542 A1	19981022	LSPB	+	published / reissued	
WO9846542 A1	19991006	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1998914973 COUNTRY OF REF DOCUMENT : EP
WO9846542 A1	19991014	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2287473 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9846542 A1	19991014	LSNP	ENP	ENTRY INTO	REF DOCUMENT NUMBER : 2287473

				THE NATIONAL PHASE IN:	COUNTRY OF REF DOCUMENT : CA
WO9846542 A1	20000126	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1998914973 COUNTRY OF REF DOCUMENT : EP
WO9846542 A1	20000210	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO9846542 A1	20000303	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP REF DOCUMENT NUMBER : 1998543588 FORMAT OF REF DOCUMENT (F/P) : F
WO9846542 A1	20011205	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1998914973 COUNTRY OF REF DOCUMENT : EP
WO9937594 A1	19990729	LSPB	+	published / reissued	
WO9937594 A1	20000720	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2319179 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9937594 A1	20000720	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2319179 COUNTRY OF REF DOCUMENT : CA
WO9937594 A1	20000818	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1999902663 COUNTRY OF REF DOCUMENT : EP
WO9937594 A1	20001115	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1999902663 COUNTRY OF REF DOCUMENT : EP
WO9937594 A1	20001130	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO9937594 A1	20040324	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1999902663 COUNTRY OF REF DOCUMENT : EP

Title: CEMENT COMPOSITION

Abstract: Source: US2004007162A A cement composition of an environmental impact reducing type, used in the field of civil engineering and construction, which provides initial strength-development equal to that of ordinary Portland cement and which can reduce the clinker calcination amount, is provided. A cement composition containing Portland cement having a 3CaO.SiO2 content of at least 60 percent and a slowly cooled blast furnace slag powder, wherein the content of the slowly cooled blast furnace slag powder is from 10 to 50 parts per 100 parts of the cement composition.

Classifications:

International (IPC 8-9): C04B18/14 C04B22/00 C04B28/04 C04B40/00 C04B7/19 C21B3/08 (Advanced/Invention); C04B7/19 (Advanced/Non-invention); C04B18/04 C04B22/00 C04B28/00 C04B40/00 C04B7/00 C21B3/00 (Core/Invention)

International (IPC 1-7): C04B11/00 C04B18/14 C04B20/04 C04B20/4 C04B22/0 C04B22/00 C04B22/06 C04B22/14 C04B22/6 C04B28/14 C04B40/00 C04B7/14 C04B7/19

CPC: C04B22/008 C04B40/0039 Y02W30/94 C04B28/04 C04B7/19 C04B18/141 C21B3/08 Y02P40/143

European: C04B18/14B C04B22/00L C04B28/04 C04B40/00D4 C04B7/19 C21B3/08

US: 106/714 106/789

Family:

Publication number	Publication date	Application number	Application date
AU2001286233 AA	20020326	AU20010286233	20010913
AU200186233 A5	20020326	AU20010086233	20010913
CN1277779 C	20061004	CN20018015412	20010913
CN1454190 A	20031105	CN20018015412	20010913
DE60109730 D1	20050504	DE20016009730	20010219
DE60109730 T2	20051103	DE20016009730T	20010219
DE60146262 D1	20120503	DE20016046262	20010913
EP1233008 A1	20020821	EP20010103977	20010219
EP1233008 B1	20050330	EP20010103977	20010219
EP1325897 A1	20030709	EP20010965630	20010913
EP1325897 A4	20070808	EP20010965630	20010913
EP1325897 B1	20120314	EP20010965630	20010913
ES2240255 T3	20051016	ES20010103977T	20010219
JP2002022518 A1	20040122	JP20020526719	20010913
JP5080714 B1	20121121	JP20020526719	20010913
JP5080714 B2	20121121	JP20020526719T	20010913
KR100717090 B1	20070510	KR20037003406	20010913
KR20030048029 A	20030618	KR20037003406	20030307
US2004007162 AA	20040115	US20030363698	20030312
US6840996 BB	20050111	US20030363698	20030312
WO0222518 A1	20020321	WO2001JP07968	20010913

Priority:

EP20010103977 20010219 EP20010965630 20010913 JP20000277493 20000913
WO2001JP07968 20010913 JP20020526719 20010913 WO2001JP07968 20030307

Probable Assignee: DENKI KAGAKU KOGYO KK

Assignee(s): (std): DENKI KAGAKU KOGYO KK ; MORIOKA MINORU ; NAKASHIMA YASUHIRO ; HIGUCHI TAKAYUKI ; TAKAHASHI MITSUO ; DENKI KAGAKU KOGYOU KK

Assignee(s): DENKI KAGAKU KOGYO K K TOKIO TOKYO ; DENKI KAGAKU KOGYO K USHIKI KAISHA AB ; DENKI KAGAKU KOGYO KABUSHIKI KAISHA

Inventor(s): (std): DAIMON MASAKI ; HIGUCHI TAKAYUKI ; HORI AKIHIRO ; MAKASHIMA YASUHIRO ; MINORU MORIOKA ; MORIOKA MINORU ; OHASHI HIROYUKI ; SAKAI ETSUO ; TAKAHASHI MITSUO ; TAKAYUKI HIGUCHI ; TAKAYUKI MORIOKA MINORU MAKASH ; TAMAKI TOSHIYUKI ; YASUHIRO MAKASHIMA ; NAKASHIMA YASUHIRO

Inventor(s): NAKASHIMA YASUHIRO C O DENKI KAGAKU KOGYO K K ; NAKASHIMA YASUHIRO C O DENKI KAGAKU KOGYO NISHI KUBIKI GUN KK ; YASUHIRO NAKASHIMA ; TAKAHASHI MITSUO C O DENKI KAGAKU KOGYO K K ; TAKAHASHI MITSUO C O DENKI KAGAKU KOGYO NISHI KUBIKI GUN KK ; MORIOKA MINORU C O DENKI KAGAKU KOGYO K K ; MORIOKA MINORU C O DENKI KAGAKU KOGYO NISHI KUBIKI GUN KK ; MORIOKA MINORU MAKASHIMA YASUHIRO HIGUCHI TAKAYUKI ; MITSUO TAKAHASHI ; HIGUCHI TAKAYUKI C O DENKI KAGAKU KOGYO K K ; HIGUCHI TAKAYUKI C O DENKI KAGAKU KOGYO NISHI KUBIKI GUN KK

Agent(s): WAECHTERSCHAEUSER AND HARTZ PATENTANWALTSPARTNERSCHAFT MBB; HARTZ NIKOLAI

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2001286233 AA	20020326	LSPB	+	published / reissued	
AU200186233 A5	20020326	LSPB	+	published / reissued	
CN1277779 C	20061004	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1277779 C	20031105	LSPB	+C06	PUBLICATION	

CN1277779 C	20061004	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1454190 A	20031105	LSPB	+	published / reissued	
DE60109730 D1	20060511	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60109730 T2	20051103	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1233008 A1	20020821	LSPB	+	published / reissued	
EP1233008 A1	20021106	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20020904
EP1233008 A1	20030514	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	COUNTRY OF REF DOCUMENT : DE COUNTRY OF REF DOCUMENT : ES COUNTRY OF REF DOCUMENT : FR COUNTRY OF REF DOCUMENT : GB COUNTRY OF REF DOCUMENT : IT
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EP1233008 A1	20050330	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1233008 A1	20050504	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1233008 A1	20051016	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2240255 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) :
EP1233008 A1	20060322	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20060102
EP1233008 A1	20160108	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 16
EP1233008 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160216 YEAR OF FEE PAYMENT : 16
EP1233008 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160113 YEAR OF FEE PAYMENT : 16
EP1233008 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160222 YEAR OF FEE PAYMENT : 16
EP1233008 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160217 YEAR OF FEE PAYMENT : 16
EP1233008 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160108 YEAR OF FEE PAYMENT : 16
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EP1233008 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20170214 YEAR OF FEE PAYMENT : 17
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EP1325897 A1	20030709	LSPB	+	published / reissued	
EP1325897 A1	20030709	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20030306
EP1325897 A1	20070801	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 7/19 20060101AFI20020325BHEP
EP1325897 A1	20070801	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 40/00 20060101ALI20070627BHEP
EP1325897 A1	20070808	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20070709
EP1325897 A1	20071024	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20070919
EP1325897 A1	20120314	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1325897 A1	20120503	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 60146262 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20120503
EP1325897 A1	20130220	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20121217
EP1325897 A1	20130411	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 60146262 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20121217
EP1325897 A1	20160816	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 16
EP1325897 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160907 YEAR OF FEE PAYMENT : 16
EP1325897 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160907 YEAR OF FEE PAYMENT : 16
EP1325897 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160816 YEAR OF FEE PAYMENT : 16
EP1325897 B1	20120314	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2240255 T3	20051016	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2002022518 A1	20040122	LSPB	+	published / reissued	
JP5080714 B1	20121121	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5080714 B2	20121121	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5080714 B2	20080325	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20080324
JP5080714 B2	20110907	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110906
JP5080714 B2	20111105	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111104
JP5080714 B2	20120816	LSGT	+TRDD	DECISION OF GRANT OR	

				REJECTION WRITTEN	
JP5080714 B2	20120822	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120821
JP5080714 B2	20120823	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP5080714 B2	20120906	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120831
JP5080714 B2	20120907	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150907 YEAR OF FEE PAYMENT : 3
JP5080714 B2	20120907	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
KR100717090 B1	20070510	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100717090 B1	20050722	LSSES	A201	REQUEST FOR EXAMINATION	
KR100717090 B1	20060829	LSSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR100717090 B1	20070221	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR100717090 B1	20070504	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100717090 B1	20130419	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20130419 YEAR OF FEE PAYMENT : 7
KR100717090 B1	20140421	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20140421 YEAR OF FEE PAYMENT : 8
KR100717090 B1	20150416	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20150416 YEAR OF FEE PAYMENT : 9
KR100717090 B1	20160419	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20160419 YEAR OF FEE PAYMENT : 10
KR20030048029 A	20030618	LSPB	+	published / reissued	
US2004007162 AA	20040115	LSPB	+	published / reissued	
US6840996 BB	20050111	LSGT	+	granted / extensions (spc, cpc, pte)	
US6840996 BB	20030509	LSAS	AS	ASSIGNMENT	OWNER NAME : DENKI KAGAKU KOGYO KABUSHIKI KAISHA, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MORIOKA, MINORU; NAKASHIMA, YASUHIRO; HIGUCHI, TAKAYUKI; AND OTHERS; REEL/FRAME:014048/0145 EFFECTIVE DATE : 20030207
US6840996 BB	20080627	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6840996 BB	20120613	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6840996 BB	20160630	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO0222518 A1	20020321	LSPB	+	published / reissued	
WO0222518 A1	20030306	LSNP	+WWE	WIPO INFORMATION:	REF DOCUMENT NUMBER : 2002526719

WO0222518 A1	20030306	LSNP	+WWE	ENTRY INTO NATIONAL PHASE	COUNTRY OF REF DOCUMENT : JP
WO0222518 A1	20030307	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001965630 COUNTRY OF REF DOCUMENT : EP
WO0222518 A1	20030310	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020037003406 COUNTRY OF REF DOCUMENT : KR
WO0222518 A1	20030312	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 018154123 COUNTRY OF REF DOCUMENT : CN
WO0222518 A1	20030618	LSPB	+WWP	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10363698 COUNTRY OF REF DOCUMENT : US
WO0222518 A1	20030709	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1020037003406 COUNTRY OF REF DOCUMENT : KR
WO0222518 A1	20030709	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001965630 COUNTRY OF REF DOCUMENT : EP
WO0222518 A1	20030724	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642

Title: FLY ASH COMPOSITION FOR USE IN CONCRETE MIX

Abstract: Source: US2002033119A A fly ash composition is provided which includes a blend of Class C fly ash, potassium carbonate, and lithium carbonate, which, in combination, reduce alkali silica reactivity when the fly ash composition is used in concrete applications. The fly ash composition includes from about 65 to 99 wt percent Class C fly ash, from about 0.1 weight percent to about 4 wt percent potassium carbonate, and from about 0.1 weight percent to about 4 weight percent lithium carbonate.

Classifications:

International (IPC 8-9): C04B22/10 C04B28/04 C04B40/00 C04B7/12 C04B7/13 (Advanced/Invention); C04B22/00 C04B28/00 (Core/Invention)

International (IPC 1-7): C04B14/00 C04B18/06 C04B7/12 C04B7/13

CPC: Y10S106/01 C04B22/10 C04B28/04 C04B40/0039 C04B40/0042 Y02W30/92

European: C04B22/10 C04B28/04 C04B40/00D4 C04B40/00D4B

US: 106/705 106/706 106/709 106/DIG.1

Family:

Publication number	Publication date	Application number	Application date
AU2002313643 AA	20030108	AU20020313643	20020624
CA2451657 AA	20031222	CA20022451657	20020624
CN100340514 C	20071003	CN20028014164	20020624
CN1527803 A	20040908	CN20028014164	20020624
EP1414768 A1	20040506	EP20020753347	20020624
EP1414768 A4	20060816	EP20020753347	20020624
HK1065774 A3	20050304	HK20040108666	20041104
MXPA03012005 A1	20040603	MX2003PA12005	20020624
US2002033119 AA	20020321	US20010888691	20010625
US6251178 BA	20010626	US20000493370	20000128
US6482258 BB	20021119	US20010888691	20010625
WO03000615 A1	20030103	WO2002US19780	20020624

Priority:

US19990117818P 19990129 US20000493370 20000128 US20010888691 20010625
WO2002US19780 20020624

Probable Assignee: MINERAL RESOURCE TECHNOLOGIES INC

Assignee(s): (std): MINERAL RESOURCE TECHNOLOGIES ; MINERAL RESOURCE TECHNOLOGIES INC ; STYRON ROBERT WILLIAM

Assignee(s): MINERAL RESOURCE TECHNOLOGIES LLC SUITE ; MINERAL RESOURCE TECHNOLOGIES LLC

Inventor(s): (std): ROBERT WILLIAM STYRON ; RW STYRON ; STYRON R W ; STYRON ROBERT WILLIAM

Inventor(s): R W STYRON

Agent(s): GOWLING LAFLEUR HENDERSON LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2002313643 AA	20030108	LSPB	+	published / reissued	
CA2451657 AA	20031222	LSPB	+	published / reissued	
CA2451657 AA	20031222	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2451657 AA	20070228	LSES	+EEER	EXAMINATION REQUEST	
CA2451657 AA	20100625	LSLE	-FZDE	DEAD	
CA2451657 AA	20100822	LSLE	-FZDE	DEAD	EFFECTIVE DATE : 20100625
CN100340514 C	20071003	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1527803 A	20040908	LSPB	+	published / reissued	
CN1527803 A	20040908	LSPB	+C06	PUBLICATION	
CN1527803 A	20071003	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1527803 A	20100922	LSLE	-C17	CESSATION OF PATENT RIGHT	
EP1414768 A1	20040506	LSPB	+	published / reissued	
EP1414768 A1	20040506	LSES	+17P	REQUEST FOR	EFFECTIVE DATE : 20040123

				EXAMINATION FILED	
EP1414768 A1	20050427	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MINERAL RESOURCE TECHNOLOGIES, INC.
EP1414768 A1	20060816	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20060718
EP1414768 A1	20070502	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20061004
EP1414768 A1	20091014	LSRV	-18R	REFUSED	EFFECTIVE DATE : 20090519
EP1414768 A1	20110211	LSWD	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : WD REF DOCUMENT NUMBER : 1065774 COUNTRY OF REF DOCUMENT : HK
HK1065774 A3	20050304	LSPB	+	published / reissued	
MXPA03012005 A1	20040603	LSPB	+	published / reissued	
MXPA03012005 A1	20060209	LSGT	+FG	GRANT OR REGISTRATION	
US2002033119 AA	20020321	LSPB	+	published / reissued	
US6251178 BA	20010626	LSGT	+	granted / extensions (spc, cpc, pte)	
US6251178 BA	20000516	LSAS	AS	ASSIGNMENT	OWNER NAME : MINERAL RESOURCE TECHNOLOGIES, LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:STYRON, ROBERT WILLIAM; REEL/FRAME:010812/0971 EFFECTIVE DATE : 20000503
US6251178 BA	20041227	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6251178 BA	20050124	LSAS	AS	ASSIGNMENT	OWNER NAME : MINERAL RESOURCE TECHNOLOGIES, INC., TEXAS DESCRIPTION : MERGER; ASSIGNOR:MINERAL RESOURCE TECHNOLOGIES, LLC; REEL/FRAME:015596/0092 EFFECTIVE DATE : 20011031
US6251178 BA	20081226	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6251178 BA	20121226	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US6482258 BB	20021119	LSGT	+	granted / extensions (spc, cpc, pte)	
US6482258 BB	20010910	LSAS	AS	ASSIGNMENT	OWNER NAME : MINERAL RESOURCE TECHNOLOGIES, LLC, GEORGIA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:STYRON, ROBERT WILLIAM; REEL/FRAME:012144/0216 EFFECTIVE DATE : 20010823
US6482258 BB	20050124	LSAS	AS	ASSIGNMENT	OWNER NAME : MINERAL RESOURCE TECHNOLOGIES, INC., TEXAS DESCRIPTION : MERGER; ASSIGNOR:MINERAL RESOURCE TECHNOLOGIES, LLC; REEL/FRAME:015596/0092 EFFECTIVE DATE : 20011031
US6482258 BB	20060519	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6482258 BB	20100519	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6482258 BB	20140218	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO03000615 A1	20030103	LSPB	+	published / reissued	
WO03000615 A1	20031219	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL	REF DOCUMENT NUMBER : PA/A/2003/012005 COUNTRY OF REF DOCUMENT : MX

PHASE					
WO03000615 A1	20031222	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2451657 COUNTRY OF REF DOCUMENT : CA
WO03000615 A1	20040114	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 20028141644 COUNTRY OF REF DOCUMENT : CN
WO03000615 A1	20040120	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2002753347 COUNTRY OF REF DOCUMENT : EP
WO03000615 A1	20040506	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO03000615 A1	20040506	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2002753347 COUNTRY OF REF DOCUMENT : EP
WO03000615 A1	20060427	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO03000615 A1	20060427	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : JP

Title: VERSATILE ADDITIVES FOR WELL CEMENTING APPLICATIONS

Abstract: Source: US2008318811A The present invention provides a versatile additive for improving the properties of a cement slurry made with portland cement and to be utilized in well cementing, said versatile additive comprising type of silicates and/or borates that inhibit gelation occurring with the interstitial phase. The additive of the present invention improves significantly the rheology (i.e., strong dispersing effect) and can even overcome severe gelation problems. At temperature above about 88 degrees centigrade (190 degrees Fahrenheit) the additive acts as retarder aid, enabling to reduce considerably the concentration of retarder required to achieve a given thickening time.

Classifications:

International (IPC 8-9): C04B22/00 C04B28/04 C04B28/26

C04B40/00 C09K8/42 C09K8/467 E21B33/14 (Advanced/Invention);

C04B28/00 C04B40/00 C09K8/42 (Core/Invention)

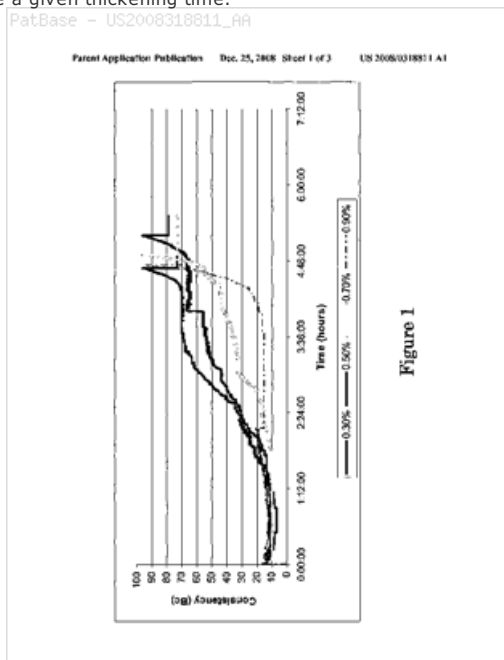
International (IPC 1-7): C04B28/04

CPC: C09K8/467 C04B28/04 C04B28/26 C04B40/0039 C04B2103/22 C04B2111/00146

European: C04B28/04 C04B28/26 C04B40/00D4 C09K8/467

M04B103/22 M04B111/00M16

US: 166/293 507/207 507/208 507/208P 507/273

**Family:**

Publication number	Publication date	Application number	Application date
BRPI0617742 A2	20110809	BR2006PI17742	20061023
CA2626739 AA	20080421	CA20062626739	20061023
CA2626739 C	20151006	CA20062626739	20061023
CN101321712 A	20081210	CN200680039651	20061023
EA017220 B1	20121030	EA20080001190	20061023
EA200801190 A1	20100226	EA20080001190	20061023
EP1780185 A1	20070502	EP20050292259	20051025
GC4032 A	20160313	GC2006P007102	20061028
IN02033CN2008 A	20090227	IN2008CN02033	20080424
IN273188 B	20160527	IN2008CN02033	20080424
MY148616 A	20130515	MY20080001270	20061023
NO20081966 A	20080520	NO20080001966	20080425
US2008318811 AA	20081225	US20060091515	20061023
US7946343 BB	20110524	US20060091515	20061023
WO07048560 A2	20070503	WO2006EP10204	20061023
WO07048560 A3	20070719	WO2006EP10204	20061023
WO07048560 C1	20080626	WO2006EP10204	20061023

Priority:

EP20050292259 20051025 WO2006EP10204 20061023

Probable Assignee: SCHLUMBERGER TECHNOLOGY CORP

Assignee(s): (std): PRAD RES AND DEV LTD ; PRAD RES AND DEV NV ; SCHLUMBERGER HOLDINGS ; SCHLUMBERGER TECHNOLOGY BV ; SCHLUMBERGER SERVICES PETROL ; SCHLUMBERGER CA LTD ; PYATINA TATIANA ; SCHLUMBERGER TECHNOLOGY CORP ; CARITEY JEAN PHILIPPE ; MICHAUX MICHEL ; THERY FREDERIC

Assignee(s): PRAD R AND D LTD ; PRAD RESEARCH AND DEVELOPMENT NV ; PRAD RESEARCH AND DEVELOPMENT LTD ; SCHLUMBERGER HOLDINGS LTD ; SCHLUMBERGER CANADA LTD ; SERVICES PETROLIERS SCHLUMBERGER ; PRAD RESEARCH AND DEVELOPMENT N V

Inventor(s): (std): FREDERIC THERY ; JEAN PHILIPPE CARITEY ; MICHAUX MICHEL ; MICHEL MICHAUX ; PYATINA TATIANA ; CARITEY JEAN PHILIPPE ; TATIANA PYATINA ; THERY FREDERIC

Inventor(s): COLIN MICHAEL SAYERS ; RICHARD ANTHONY BIRCHWOOD

Agent(s): SMART AND BIGGAR; SULEIMAN I AL AMMAR LAW OFFICE; SCHLUMBERGER TECHNOLOGY DAVID CATE CORP; DAVID; ROBIN; JEFFREY

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
BRPI0617742 A2	20110809	LSPB	+	published / reissued	
BRPI0617742 A2	20161025	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0617742 A2	20170221	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
CA2626739 AA	20080421	LSPB	+	published / reissued	
CA2626739 AA	20080421	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2626739 AA	20111012	LSES	+EEER	EXAMINATION REQUEST	
CA2626739 AA	20111021	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20111012
CA2626739 C	20151006	LSGT	+	granted / extensions (spc, cpc, pte)	
CN101321712 A	20081210	LSPB	+	published / reissued	
CN101321712 A	20081210	LSPB	+C06	PUBLICATION	
CN101321712 A	20130227	LSDW	-C02	DEEMED WITHDRAWAL OF PATENT APPLICATION AFTER PUBLICATION (PATENT LAW 2001)	
EA017220 B1	20121030	LSGT	+	granted / extensions (spc, cpc, pte)	
EA017220 B1	20140730	LSLE	-MM4A	LAPSE OF A EURASIAN PATENT DUE TO NON-PAYMENT OF RENEWAL FEES WITHIN THE TIME LIMIT IN THE FOLLOWING DESIGNATED STATE(S)	DESIGNATED STATE(S) : AM AZ BY KZ KG MD TJ TM
EA200801190 A1	20100226	LSPB	+	published / reissued	
EP1780185 A1	20070502	LSPB	+	published / reissued	
EP1780185 A1	20071212	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20071029
EP1780185 A1	20080102	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20071130
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GC4032 A	20160313	LSGT	+	granted / extensions (spc, cpc, pte)	
IN02033CN2008 A	20090227	LSPB	+	published / reissued	
IN273188 B	20160527	LSGT	+	granted / extensions (spc, cpc, pte)	
MY148616 A	20130515	LSGT	+	granted / extensions (spc, cpc, pte)	
NO20081966 A	20080520	LSPB	+	published / reissued	
NO20081966 A	20150526	LSRV	-FC2A	WITHDRAWAL, REJECTION OR DISMISSAL OF LAID OPEN PATENT	

APPLICATION					
US2008318811 AA	20081225	LSPB	+	published / reissued	
US2008318811 AA	20080822	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CARITEY, JEAN-PHILIPPE; MICHAUX, MICHEL; PYATINA, TATIANA; AND OTHERS; REEL/FRAME:021429/0245; SIGNING DATES FROM 20080603 TO 20080610
US7946343 BB	20110524	LSGT	+	granted / extensions (spc, cpc, pte)	
US7946343 BB	20080822	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CARITEY, JEAN-PHILIPPE; MICHAUX, MICHEL; PYATINA, TATIANA; AND OTHERS; REEL/FRAME:021429/0245; SIGNING DATES FROM 20080603 TO 20080610
US7946343 BB	20080822	LSAS	AS	ASSIGNMENT	OWNER NAME : SCHLUMBERGER TECHNOLOGY CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CARITEY, JEAN-PHILIPPE; MICHAUX, MICHEL; PYATINA, TATIANA; AND OTHERS; SIGNING DATES FROM 20080603 TO 20080610; REEL/FRAME:021429/0245
US7946343 BB	20110504	LSGT	PAT1	Patented Case	
US7946343 BB	20141029	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
WO07048560 A2	20070503	LSPB	+	published / reissued	
WO07048560 A3	20080421	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : MX/A/2008/005180 COUNTRY OF REF DOCUMENT : MX
WO07048560 A3	20080421	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2626739 COUNTRY OF REF DOCUMENT : CA
WO07048560 A3	20080426	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO07048560 A3	20080429	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008040697 COUNTRY OF REF DOCUMENT : EG
WO07048560 A3	20080822	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12091515 COUNTRY OF REF DOCUMENT : US
WO07048560 A3	20110809	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0617742 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20080424

Title: Catalyst for reactivation of delayed cementitious systems

Abstract: A setting and hardening accelerator (I) for cement-like compositions (A) contains (a) at least one aluminum oxide and (b) at least one retardant component selected from organic acids, organic acid salts, retardants and/or liquefiers. Independent claims are included for: (1) workable, retarded cement-like compositions (A') containing cement, water, retardant(s) and accelerator(s) (I) as defined above; and (2) a method for accelerating the setting and hardening of a cement-like composition, involving addition of (I), in an amount of 1-15 (preferably 3-10) weight percent based on cement, to a mixture containing at least water, cement and retardant(s).

Classifications:

International (IPC 8-9): C04B22/06 C04B24/04 C04B28/02 C04B40/00 (Advanced/Invention)

CPC: C04B40/0039 C04B2103/12 C04B2103/14

European: C04B40/00D4 M04B103/12 M04B103/14

Family:

Publication number	Publication date	Application number	Application date
DE502007011364 D1	20130425	DE200750011364T	20071220
EP2075240 A1	20090701	EP20070150265	20071220
EP2075240 B1	20130227	EP20070150265	20071220
ES2402670 T3	20130507	ES20070150265T	20071220

Priority:

EP20070150265 20071220

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): SIKA TECHNOLOGY AG

Inventor(s): (std): KURZ CHRISTOPHE ; WOMBACHER FRANZ

Inventor(s): WOMBACHER FRANZ 8916 ; KURZ CHRISTOPHE 8107

Agent(s): SIKA PATENT ATTORNEYS; Sika Patent Attorneys; DE ELZABURU ALBERTO

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL PL PT RO RS SE SI SK TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2075240 A1	20090701	LSPB	+	published / reissued	
EP2075240 A1	20100217	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100104
EP2075240 A1	20100310	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	COUNTRY OF REF DOCUMENT : AT COUNTRY OF REF DOCUMENT : BE COUNTRY OF REF DOCUMENT : BG COUNTRY OF REF DOCUMENT : CH COUNTRY OF REF DOCUMENT : CY COUNTRY OF REF DOCUMENT : CZ COUNTRY OF REF DOCUMENT : DE COUNTRY OF REF DOCUMENT : DK COUNTRY OF REF DOCUMENT : EE COUNTRY OF REF DOCUMENT : ES COUNTRY OF REF DOCUMENT : FI COUNTRY OF REF DOCUMENT : FR COUNTRY OF REF DOCUMENT : GB COUNTRY OF REF DOCUMENT : GR COUNTRY OF REF DOCUMENT : HU COUNTRY OF REF DOCUMENT : IE COUNTRY OF REF DOCUMENT : IS COUNTRY OF REF DOCUMENT : IT COUNTRY OF REF DOCUMENT : LI COUNTRY OF REF DOCUMENT : LT COUNTRY OF REF DOCUMENT : LU COUNTRY OF REF DOCUMENT : LV COUNTRY OF REF DOCUMENT : MC COUNTRY OF REF DOCUMENT : MT COUNTRY OF REF DOCUMENT : NL COUNTRY OF REF DOCUMENT : PL COUNTRY OF REF DOCUMENT : PT COUNTRY OF REF DOCUMENT : RO COUNTRY OF REF DOCUMENT : SE COUNTRY OF REF DOCUMENT : SI COUNTRY OF REF DOCUMENT : SK COUNTRY OF REF DOCUMENT : TR
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EP2075240 A1	20120215	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/02 20060101ALI20120109BHEP
EP2075240 A1	20120215	LSRE	RIC1	CLASSIFICATION	CLASSIFICATIONSCHEME : IPC

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EP2075240 A1	20130228	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2075240 A1	20130315	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 598416 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20130315
EP2075240 A1	20130327	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT: GERMAN
EP2075240 A1	20130425	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 502007011364 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20130425
EP2075240 A1	20130507	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2402670 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20130507
EP2075240 A1	20130725	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : LT REF LEGAL EVENT CODE : MG4D
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EP2075240 A1	20130731	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20130227
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EP2075240 A1	20140205	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20131128
EP2075240 A1	20140313	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 502007011364 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20131128
EP2075240 A1	20140630	LSLE	-BERE	BE: LAPSED	PARTYTYPE : OWNER REF COUNTRY CODE : EP OWNER : SIKA TECHNOLOGY A.G. EFFECTIVE DATE : 20131231
EP2075240 A1	20140731	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP2075240 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20131220
EP2075240 A1	20140829	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20130227
EP2075240 A1	20140924	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2075240 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20131220
EP2075240 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20131231
EP2075240 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20131231
EP2075240 A1	20141031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20131231
EP2075240 A1	20150215	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MM01 REF DOCUMENT NUMBER : 598416

					COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20131220
EP2075240 A1	20150529	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20131220
EP2075240 A1	20150630	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : TR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20130227
EP2075240 A1	20150731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT; INVALID AB INITIO LAPSED DATE : 20071220
EP2075240 A1	20150831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20130227
EP2075240 A1	20151229	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 9
EP2075240 A1	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20151230 YEAR OF FEE PAYMENT : 9
EP2075240 A1	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20151229 YEAR OF FEE PAYMENT : 9
EP2075240 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20151221 YEAR OF FEE PAYMENT : 9
EP2075240 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160121 YEAR OF FEE PAYMENT : 9
EP2075240 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160302 YEAR OF FEE PAYMENT : 9
EP2075240 A1	20161207	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 10
EP2075240 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20161207 YEAR OF FEE PAYMENT : 10
EP2075240 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20161206 YEAR OF FEE PAYMENT : 10
EP2075240 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20161207 YEAR OF FEE PAYMENT : 10
EP2075240 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20161228 YEAR OF FEE PAYMENT : 10
EP2075240 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20161219 YEAR OF FEE PAYMENT : 10
EP2075240 B1	20130227	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2402670 T3	20130507	LSGT	+	granted /	

extensions (spc,
cpc, pte)

Title: SETTING AND HARDENING ACCELERATOR FOR HYDRAULIC BINDERS IN THE SOLID STATE

Abstract: Disclosed is a setting and hardening accelerator in the solid state which is obtainable by a process characterized in that the process comprises at least step (a) wherein at least one liquid component A comprising at least the reaction product of acid and aluminum hydroxide is brought into the solid state to receive a solid component A; and at least step (b) wherein the solid component A obtained in step (a) is mixed with at least one solid component B, wherein the solid component B comprises or consists of aluminum sulfate.

Classifications:

International (IPC 8-9): C04B20/00 C04B40/00 C07B40/00 (Advanced/Invention);
C04B40/00 (Core/Invention)

International (IPC 1-7): C04B40/00

CPC: C04B40/0039 C04B2103/12 C04B2103/14 C04B2111/00163 C04B2111/00172

European: C04B40/00D4 M04B103/12 M04B103/14 M04B111/00M16B2 M04B111/00M16B4

Family:

Publication number	Publication date	Application number	Application date
AR071151 AA	20100602	AR2009P100120	20090115
AU2009211413 AA	20090813	AU20090211413	20090204
AU2009211413 BB	20150115	AU20090211413	20090204
CA2713291 AA	20090813	CA20092713291	20090204
CL2009000220 A1	20100719	CL20090000220	20090130
EP2085370 A1	20090805	EP20080151026	20080204
IN02700KN2010 A	20101001	IN2010KN02700	20100723
IN277706 B	20161202	IN2010KN02700	20100723
PE16622009 A1	20091104	PE20090000148	20090202
WO09098220 A1	20090813	WO2009EP51245	20090204

Priority:

EP20080151026 20080204 WO2009EP51245 20090204

Probable Assignee: SIKA TECHNOLOGY AG

Assignee(s): (std): ARANCIBIA LILI ; GALLEGOS PEDRO ; LINDLAR BENEDIKT ; OLIVARES HUGO ; SIKA TECHNOLOGY AG

Inventor(s): (std): ARANCIBIA HONO LILI DE LAS MERCEDES ; ARANCIBIA LILI ; ARNCIBIA LILI ; GALLEGOS ALVARADO PEDRO VICENTE ; GALLEGOS PEDRO ; LINDLAR BENEDIKT ; LINDLAR BENEDIKT KONRAD ; OLIVARES HUGO ; OLIVARES TORO HUGO ALEJANDRO

Inventor(s): PEDRO GALLEGOS ; HUGO OLIVARES ; LILI ARANCIBIA ; BENEDIKT LINDLAR

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; JOHANSSON; SIKA PATENT ATTORNEYS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR071151 AA	20100602	LSPB	+	published / reissued	
AR071151 AA	20160831	LSWD	-FB	SUSPENSION OF GRANTING PROCEDURE	
AU2009211413 AA	20090813	LSPB	+	published / reissued	
AU2009211413 AA	20150514	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2009211413 BB	20150115	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2713291 AA	20090813	LSPB	+	published / reissued	
CA2713291 AA	20140205	LSSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20140116
CL2009000220 A1	20100719	LSPB	+	published / reissued	
EP2085370 A1	20090805	LSPB	+	published / reissued	
EP2085370 A1	20090805	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090304
EP2085370 A1	20091007	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20090910
EP2085370 A1	20100414	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

IN02700KN2010 A	20101001	LSPB	+	published / reissued	
IN277706 B	20161202	LSGT	+	granted / extensions (spc, cpc, pte)	
PE16622009 A1	20091104	LSPB	+	published / reissued	
PE16622009 A1	20140130	LSRV	-FC	REFUSAL	
WO09098220 A1	20090813	LSPB	+	published / reissued	
WO09098220 A1	20100722	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009211413 COUNTRY OF REF DOCUMENT : AU
WO09098220 A1	20100727	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2713291 COUNTRY OF REF DOCUMENT : CA
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WO09098220 A1	20100805	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09098220 A1	20100812	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009211413 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090204 KIND CODE OF REF DOCUMENT : A
WO09098220 A1	20110323	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 09708785 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: INORGANIC DISSOLUTION ACCELERATOR, AMORPHOUS HIGH-CONCENTRATION WATER-SOLUBLE INORGANIC COMPOUND, SOLVENTLESS INORGANIC FOAM, NONFLAMMABLE ORGANIC-INORGANIC FOAM AND COMPOSITION RAPIDLY CURABLE BY HEATING

Abstract: Source: JP2010065228A PROBLEM TO BE SOLVED: To provide an inorganic dissolution accelerator which is for obtaining a water-soluble inorganic compound with a high concentration and a high solid content and which transforms a water-insoluble metal or inorganic compound to a water-soluble compound. SOLUTION: The inorganic dissolution accelerator is obtained from at least one compound selected from a fluoride, sulfurous acid, phosphorous acid, nitrous acid, a mineral acid, a mineral acid salt and a boric acid compound and an alkali metal or an alkali metal inclusion. For example, the accelerator is able to transform silicon, aluminum, a metal of boron, or metallic compounds of these in water into an amorphous high-concentration water-soluble inorganic compound.

Classifications:

International (IPC 8-9): C04B22/04 C04B22/08 C04B22/12 C04B22/14 C04B22/16 C04B28/00 C04B28/02 C04B28/04 C04B40/00 C08G18/00 C09K21/02 C09K21/14

C09K3/00 (Advanced/Invention);

C08G101/00 (Advanced/Non-invention);

C04B22/00 C04B28/00 C04B40/00 C08G18/00 C09K21/00

C09K3/00 (Core/Invention)

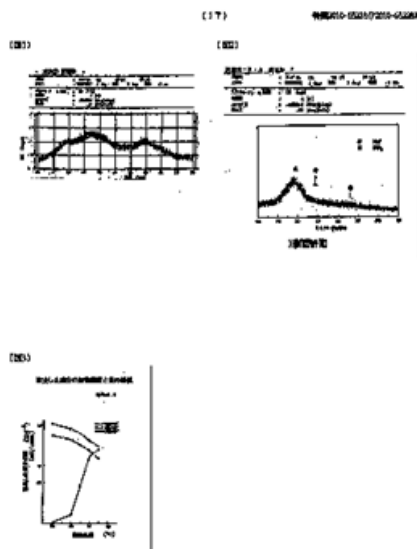
CPC: C09K21/14 C04B28/006 C04B28/04 C04B28/06 C04B28/26

C04B40/0039 C04B2103/10 C04B2111/28 C09K21/02 Y02P40/165

European: C04B28/00G C04B28/04 C04B28/06 C04B28/26

C04B40/00D4 C09K21/02 C09K21/14 M04B103/10 M04B111/28

PatBase - JP2010065228_A2



Family:

Publication number	Publication date	Application number	Application date
JP2010065228 A2	20100325	JP20090257770	20091111
JP4555394 B2	20100929	JP20090257770	20091111

Priority:

JP20010032671 20010208 JP20020563258 20020208 JP20090257770 20091111
JP20020563258T 20020208

Probable Assignee: KOKUTA HIROSHI

Assignee(s): (std): KOKUTA HIROSHI

Inventor(s): (std): KOKUTA HIROSHI ; KOKUTA KATSUHIRO ; KOKUTA KENJI ; KOKUTA NAOTO ; UCHIDA HIDEAKI

Agent(s): YAMASAKI YUKUZO

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
JP2010065228 A2	20100325	LSPB	+	published / reissued	
JP4555394 B2	20100929	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4555394 B2	20100210	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100209
JP4555394 B2	20100318	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100317
JP4555394 B2	20100625	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4555394 B2	20100707	LSGT	+A01	WRITTEN DECISION TO GRANT A	DESCRIPTION :

				PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100706
JP4555394 B2	20100708	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4555394 B2	20100722	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100715
JP4555394 B2	20100723	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130723 YEAR OF FEE PAYMENT : 3
JP4555394 B2	20100723	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4555394 B2	20130723	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	

Title: SET- AND HARDENING ACCELERATOR

Abstract: The accelerator contains at least one aluminum compound and at least one polymer. The monomer units of the polymer include at least acrylamide, methacrylamide and/or ethylenic unsaturated compounds which carry a di-alkyl amino group or a tri-alkyl ammonium group. The aluminum compound is a complex and/or a salt of aluminum. The ligand or anion is one of sulfate, nitrate, nitrite, chloride, carboxylate, mixtures of carboxylates, phosphonates, phosphate, phosphites and mixtures of the ligands or anions. The carboxylate anion is formate, acetate, glycolate, lactate, maleinate, citrate, tartrate, oxalate and/or malonate. The aluminum compound is a complex and/or salt of aluminum containing hydroxyl groups in addition to the anions. Further detailed lists of suitable polymers are provided. The mean molecular weight of the polymer is preferably 1000000 Daltons or more. It is soluble in water at a pH of 9, preferably a pH of 11-13. At least one aluminum compound and at least one polymer exist as a mixture. The accelerator is an aqueous solution, a suspension or powder. In aqueous solution or in a suspension, the aluminum is preferably at an Al 2O 3 concentration of 6-20 wt percent and the polymer concentration is 0.005-5 wt percent, preferably 0.005-3 wt percent. In powder form, the aluminum and polymer concentrations are preferably 15-60 wt percent and 0.025-5 wt percent respectively. The accelerator is used in a mixture or in a two-component system. Used as a two-component system, the aluminum compound(s) and polymer(s) are applied separately. Application is by wet spraying, dry spraying. Independent claims are included for the following: (A) the method of acceleration of bonding and/or hardening of cement; (B) and the concrete so produced.

Classifications:

International (IPC 8-9): C04B22/08 C04B24/26 C04B40/00 (Advanced/Invention);

C04B103/10 (Advanced/Non-invention)

CPC: C04B40/0039 C04B2103/12 C04B2103/14 C04B2111/00163 C04B2111/00172

European: C04B40/00D4 M04B103/12 M04B103/14 M04B111/00M16B2 M04B111/00M16B4

Family:

Publication number	Publication date	Application number	Application date
EP2248780 A1	20101110	EP20100004615	20100503

Priority:

DE200910019886 20090506 DE200910024270 20090605

Probable Assignee: BK GIULINI GMBH

Assignee(s): (std): BK GIULINI GMBH

Inventor(s): (std): DOERRER HUBERT ; EXNER REINER ; LUNKENHEIMER RUDOLF ; STEIN JOCHEN

Agent(s): WAGNER JUTTA

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP2248780 A1	20101110	LSPB	+	published / reissued	
EP2248780 A1	20111123	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20110511

Title: CEMENTITIOUS COMPOSITIONS FOR DECREASING THE RATE OF WATER VAPOR EMISSIONS FROM CONCRETE AND METHODS FOR PREPARING AND USING THE SAME

Abstract: Source: US2011015306A Cementitious compositions and processes for preparing and using the cementitious compositions are provided. The cementitious compositions are characterized by the property of a reduced or an attenuated water vapor emission of a hardened concrete formed therefrom.

Classifications:

International (IPC 8-9): C04B103/14 C04B111/60 C04B14/04 C04B14/06 C04B14/08 C04B14/28 C04B16/04 C04B18/06 C04B18/08 C04B18/14 C04B2/02 C04B20/00 C04B22/08 C04B22/12 C04B22/14 C04B24/02 C04B24/04 C04B24/12 C04B24/24 C04B24/26 C04B24/28 C04B24/32 C04B28/00 C04B28/02 C04B28/04 C04B28/26 C04B40/06 C04B7/00 C04B7/14 C08K3/00 (Advanced/Invention); C04B103/00 C04B103/12 C04B103/14 C04B103/32 C04B103/56 C04B111/60 (Advanced/Non-invention) **CPC:** C04B24/04 C04B22/08 C04B24/125 C04B16/04 C04B14/043 C04B14/08 C04B14/28 C04B18/08 C04B18/141 C04B20/008 C04B22/085 C04B22/124 C04B22/128 C04B24/2641 C04B24/32 C04B2103/0088 C04B2103/12 C04B2103/32 C04B2103/58 C04B22/14 C04B24/24 C04B20/002 C04B28/02 C04B28/04 C04B40/0633 C04B2103/14 C04B2111/60 Y02P40/146 Y02W30/92 Y02W30/94 C04B12/04 C04B14/06 C04B14/14 C04B22/064 C04B22/10 C04B22/142 C04B14/062 C04B14/106 C04B18/146 C04B20/1022 C04B20/1088 C04B20/107 C04B20/1085 C04B14/108 C04B14/16 C04B14/18 C04B14/185 C04B14/202 C04B14/204 C04B2103/302 C04B22/147

European: C04B28/02

US: 1/1 106/605 106/634 106/638 106/638S 106/672 106/677 106/705 106/705S 106/789 106/789S 106/792 106/792S 106/795 106/795S 106/802 106/802S 106/810 106/815 106/816 106/816S 106/817 106/817S 524/5 524/5P 524/5S

PatBase - US2011015306_AA

Patent Application Publication Jan. 20, 2011 US 2011/0015306 A1

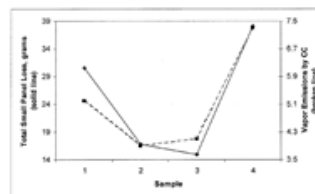


FIG. 1

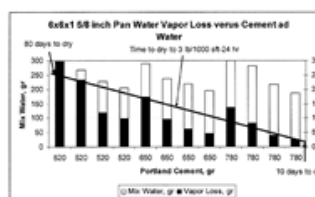


FIG. 2

Family:

Publication number	Publication date	Application number	Application date
BR112012000965 A2	20160315	BR20121100965	20100715
CA2762317 AA	20111116	CA20102762317	20100715
CA2762317 C	20161011	CA20102762317	20100715
CA2879671 AA	20150116	CA20132879671	20130719
CL2015000129 A1	20160422	CL20150000129	20150119
EP2874970 A1	20150527	EP20130745261	20130719
MX2011013854 A1	20120419	MX20110013854	20100715
MX2015000834 A1	20150706	MX20150000834	20130719
MX340470 B	20160707	MX20110013854	20100715
US2011015306 AA	20110120	US20090503610	20090715
US2012097072 AA	20120426	US20100062603	20100715
US2013303662 AA	20131114	US20130947715	20130722
US2015152006 AA	20150604	US20150601175	20150120
US2016016852 AA	20160121	US20150867545	20150928
US2017057869 AA	20170302	US20160200655	20160701
US9133058 BB	20150915	US20100062603	20100715
US9174869 BB	20151103	US20130947715	20130722
US9382157 BB	20160705	US20150601175	20150120
WO11008936 A2	20110120	WO2010US42109	20100715
WO11008936 A3	20110609	WO2010US42109	20100715
WO14015289 A1	20140123	WO2013US51356	20130719

Priority:

US20090503610	20090715	US20100062603	20100715	US20130947715	20130722
US20110062603	20110516	US20120709428P	20121004	US20120673927P	20120720
WO2010US42109	20100715	WO2013US51356	20130719	US20150601175	20150120
US20150867545	20150928	US20160200655	20160701		

Probable Assignee: US CONCRETE INC

Assignee(s): (std): HENKENSIEFEN RYAN A ; U S CONCRETE INC ; TURPIN RAYMOND C JUN ; US CONCRETE INC ; TURPIN JR RAYMOND C

Assignee(s): TURPIN RAYMOND C JR ; US BANK NATIONAL ASSOCIATION NOTEHOLDER COLLATERAL AGENT AS ; BANK OF AMERICA NA ; GUZZETTA ALANA ; US BANK NATIONAL ASSOCIATION ; SAN DIEGO PRECAST CONCRETE INC ; HENKENSIEFEN RYAN ALLEN ; JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS ; TURPIN RAYMOND C

Inventor(s): (std): GUZZETTA ALANA ; GUZZETTA ALANA GRACE ; HENKENSIEFEN RYAN A ; HENKENSIEFEN RYAN ALLEN ; TURPIN JR RAYMOND C ; TURPIN RAYMOND C ; TURPIN RAYMOND C JR

Inventor(s): RAYMOND C TURPIN JR ; RYAN A HENKENSIEFEN

Agent(s): SMART AND BIGGAR; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; SARGENT Y KRAHN; TURNER CRAIG ROBERT; ALSTON AND BIRD LLP; HAYNES AND BOONE LLP; RANDALL C; JOHN M; HESS TODD M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK

Legal status (INPADOC)[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
BR112012000965 A2	20160315	LSPB	+	published / reissued	
CA2762317 AA	20111116	LSPB	+	published / reissued	
CA2762317 AA	20111116	LSES	+EEER	EXAMINATION REQUEST	
CA2762317 AA	20120117	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20111116
CA2762317 C	20161011	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2879671 AA	20150116	LSPB	+	published / reissued	
CL2015000129 A1	20160422	LSPB	+	published / reissued	
EP2874970 A1	20150527	LSPB	+	published / reissued	
EP2874970 A1	20150527	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150216
EP2874970 A1	20160316	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20150917
MX2011013854 A1	20120419	LSPB	+	published / reissued	
MX2011013854 A1	20160707	LSGT	+FG	GRANT OR REGISTRATION	
MX2015000834 A1	20150706	LSPB	+	published / reissued	
MX340470 B	20160707	LSGT	+	granted / extensions (spc, cpc, pte)	
US2011015306 AA	20110120	LSPB	+	published / reissued	
US2011015306 AA	20090820	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TURPIN, RAYMOND C., JR.; REEL/FRAME:023124/0867 EFFECTIVE DATE : 20090722
US2011015306 AA	20100902	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. BANK NATIONAL ASSOCIATION, TENNESSEE DESCRIPTION : FIRST LIEN PATENT SECURITY AGREEMENT; ASSIGNOR:U.S. CONCRETE, INC.; REEL/FRAME:024933/0084 EFFECTIVE DATE : 20100831
US2011015306 AA	20100909	LSAS	AS	ASSIGNMENT	OWNER NAME : JPMORGAN CHASE BANK, N.A., AS ADMINISTRATIVE AGENT DESCRIPTION : SECURITY AGREEMENT; ASSIGNORS:U.S. CONCRETE, INC.; SAN DIEGO PRECAST CONCRETE, INC.; REEL/FRAME:024953/0788 EFFECTIVE DATE : 20100831
US2011015306 AA	20120905	LSAS	AS	ASSIGNMENT	OWNER NAME : SAN DIEGO PRECAST CONCRETE, INC., TEXAS DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:JPMORGAN CHASE BANK, N.A.; REEL/FRAME:028900/0549 EFFECTIVE DATE : 20120831
US2011015306 AA	20120905	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:JPMORGAN CHASE BANK, N.A.; REEL/FRAME:028900/0549 EFFECTIVE DATE : 20120831

US2011015306 AA	20120905	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., TEXAS DESCRIPTION : SECOND LIEN PATENT SECURITY AGREEMENT; ASSIGNOR:U.S. CONCRETE, INC.; REEL/FRAME:028914/0603 EFFECTIVE DATE : 20120831
US2011015306 AA	20131122	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:U.S. BANK NA; REEL/FRAME:031657/0147 EFFECTIVE DATE : 20131122
US2011015306 AA	20131122	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. BANK NATIONAL ASSOCIATION, AS NOTEHOLDER COLL DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:U.S. CONCRETE, INC.; REEL/FRAME:031711/0492 EFFECTIVE DATE : 20131122
US2011015306 AA	20140905	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2012097072 AA	20120426	LSPB	+	published / reissued	
US2012097072 AA	20110516	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HENKENSIEFKEN, RYAN A.; REEL/FRAME:026285/0482 EFFECTIVE DATE : 20110318
US2012097072 AA	20120905	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., TEXAS DESCRIPTION : SECOND LIEN PATENT SECURITY AGREEMENT; ASSIGNOR:U.S. CONCRETE, INC.; REEL/FRAME:028914/0603 EFFECTIVE DATE : 20120831
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US2012097072 AA	20131122	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:U.S. BANK NA; REEL/FRAME:031657/0147 EFFECTIVE DATE : 20131122
US2013303662 AA	20131114	LSPB	+	published / reissued	
US2013303662 AA	20130802	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GUZZETTA, ALANA; HENKENSIEFKEN, RYAN ALLEN; TURPIN, RAYMOND C., JR.; SIGNING DATES FROM 20130724 TO 20130730; REEL/FRAME:030933/0642
US2013303662 AA	20130819	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : CORRECTIVE ASSIGNMENT TO CORRECT THE RECEIVING PARTY'S STREET ADDRESS PREVIOUSLY RECORDED ON REEL 030933 FRAME 0642. ASSIGNOR(S) HEREBY CONFIRMS THE RECEIVING PARTY'S STREET ADDRESS SHOULD BE 331 N. MAIN STREET; ASSIGNORS:GUZZETTA, ALANA; HENKENSIEFKEN, RYAN ALLEN; TURPIN, RAYMOND C., JR.; SIGNING DATES FROM 20130724 TO 20130730; REEL/FRAME:031034/0930
US2013303662 AA	20131122	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. BANK NATIONAL ASSOCIATION, AS NOTEHOLDER COLL

					DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:U.S. CONCRETE, INC.; REEL/FRAME:031711/0492 EFFECTIVE DATE : 20131122
US2013303662 AA	20141222	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., TEXAS DESCRIPTION : FIRST AMENDMENT TO SECOND LIEN PATENT SECURITY AGREEMENT; ASSIGNOR:U.S. CONCRETE, INC.; REEL/FRAME:034696/0481 EFFECTIVE DATE : 20141217
US2015152006 AA	20150604	LSPB	+	published / reissued	
US2015152006 AA	20150122	LSAS	AS	ASSIGNMENT	OWNER NAME : US CONCRETE, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GUZZETTA, ALANA GRACE; HENKENSIEFKEN, RYAN ALLEN; TURPIN, RAYMOND C., JR.; REEL/FRAME:034792/0269 EFFECTIVE DATE : 20150119
US2015152006 AA	20151201	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. BANK NATIONAL ASSOCIATION, TENNESSEE DESCRIPTION : FIRST LIEN PATENT SECURITY AGREEMENT; ASSIGNORS:U.S. CONCRETE, INC.; REDI-MIX, LLC; REEL/FRAME:037184/0896 EFFECTIVE DATE : 20151201
US2016016852 AA	20160121	LSPB	+	published / reissued	
US2016016852 AA	20151016	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GUZZETTA, ALANA; HENKENSIEFKEN, RYAN ALLEN; TURPIN, RAYMOND C., JR.; SIGNING DATES FROM 20150930 TO 20151002; REEL/FRAME:036807/0786
US2016016852 AA	20151201	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. BANK NATIONAL ASSOCIATION, TENNESSEE DESCRIPTION : FIRST LIEN PATENT SECURITY AGREEMENT; ASSIGNORS:U.S. CONCRETE, INC.; REDI-MIX, LLC; REEL/FRAME:037184/0896 EFFECTIVE DATE : 20151201
US2017057869 AA	20170302	LSPB	+	published / reissued	
US2017057869 AA	20160701	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : US CONCRETE, INC., TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GUZZETTA, ALANA GRACE; HENKENSIEFKEN, RYAN ALLEN; TURPIN, RAYMOND C., JR.; REEL/FRAME:039065/0759 EFFECTIVE DATE : 20150119
US9133058 BB	20150915	LSGT	+	granted / extensions (spc, cpc, pte)	
US9133058 BB	20120905	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. CONCRETE, INC., TEXAS DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:JPMORGAN CHASE BANK, N.A.; REEL/FRAME:028900/0549 EFFECTIVE DATE : 20120831
US9133058 BB	20120905	LSAS	AS	ASSIGNMENT	OWNER NAME : SAN DIEGO PRECAST CONCRETE, INC., TEXAS DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:JPMORGAN CHASE BANK, N.A.; REEL/FRAME:028900/0549 EFFECTIVE DATE : 20120831
US9133058 BB	20150826	LSGT	PAT1	Patented Case	

US9133058 BB	20151201	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. BANK NATIONAL ASSOCIATION, TENNESSEE DESCRIPTION : FIRST LIEN PATENT SECURITY AGREEMENT; ASSIGNORS:U.S. CONCRETE, INC.; REDI-MIX, LLC; REEL/FRAME:037184/0896 EFFECTIVE DATE : 20151201	
US9174869 BB	20151103	LSGT	+	granted / extensions (spc, cpc, pte)		
US9174869 BB	20151014	LSGT	PAT1	Patented Case		
US9174869 BB	20151201	LSAS	AS	ASSIGNMENT	OWNER NAME : U.S. BANK NATIONAL ASSOCIATION, TENNESSEE DESCRIPTION : FIRST LIEN PATENT SECURITY AGREEMENT; ASSIGNORS:U.S. CONCRETE, INC.; REDI-MIX, LLC; REEL/FRAME:037184/0896 EFFECTIVE DATE : 20151201	
US9382157 BB	20160705	LSGT	+	granted / extensions (spc, cpc, pte)		
US9382157 BB	20151113	LSES	NFA1	Non Final Action Mailed		
WO11008936 A2	20110120	LSPB	+	published / reissued		
WO11008936 A3	20110516	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13062603 COUNTRY OF REF DOCUMENT : US	
WO11008936 A3	20111116	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2762317 COUNTRY OF REF DOCUMENT : CA	
WO11008936 A3	20120116	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE	
WO11008936 A3	20120808	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10737162 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A2	
WO11008936 A3	20160315	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 112012000965 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20120113	
WO14015289 A1	20140123	LSPB	+	published / reissued		
WO14015289 A1	20150116	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2879671 COUNTRY OF REF DOCUMENT : CA	
WO14015289 A1	20150120	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE	

Title: CONCRETE COMPOSITION**Abstract:** Source: US2012272871A A concrete composition comprising a mouldable mixture of aggregate, binder and liquid vehicle, wherein the aggregate comprises sulphur concrete-derived aggregate and wherein the binder comprises hydraulic binder. The use of crushed sulphur concrete as aggregate in cement-based concrete reduces the hardening time of the concrete.**Classifications:****International (IPC 8-9):** B28B1/00 B28B1/14 B28B17/00 C04B22/00 C04B28/04 C04B28/36 C04B40/00 C04B7/02 C04B7/36 (Advanced/Invention)**CPC:** Y02W30/94 Y02W30/95 C04B28/04 C04B2103/14**European:** C04B28/04 M04B103/14**US:** 106/736 106/815 264/109 264/333**Family:**

Publication number	Publication date	Application number	Application date
US2012272871 AA	20121101	US20100515600	20101215
US8435342 BB	20130507	US20100515600	20101215
WO11073272 A1	20110623	WO2010EP69791	20101215

Priority:

EP20090179193 20091215 WO2010EP69791 20101215

Probable Assignee: SHELL OIL CO**Assignee(s):** (std): AL ANSARY MARWA ; SHELL INT RESEARCH ; SHELL OIL CO ; SUNIFAR PARILAKATHOOTTU ABOOBACKER ; VERBIST GUY LODE MAGDA MARIA**Assignee(s):** SHELL OIL COMPANY ; SHELL INT RESEARCH MIJ BV ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B V**Inventor(s):** (std): AL ANSARY MARWA ; SUNIFAR PARILAKATHOOTTU ABOOBACKER ; VERBIST GUY LODE MAGDA MARIA**Agent(s):** CHARLES W**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**Legal status (INPADOC)**[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
US2012272871 AA	20121101	LSPB	+	published / reissued	
US8435342 BB	20130507	LSGT	+	granted / extensions (spc, cpc, pte)	
US8435342 BB	20120709	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : SHELL OIL COMPANY, TEXAS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:AL-ANSARY, MARWA; SUNIFAR, PARILAKATHOOTTU ABOOBACKER; VERBIST, GUY LODE MAGDA MARIA; REEL/FRAME:028510/0705 EFFECTIVE DATE : 20120607
US8435342 BB	20130417	LSGT	PAT1	Patented Case	
WO11073272 A1	20110623	LSPB	+	published / reissued	
WO11073272 A1	20120615	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO11073272 A1	20120709	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13515600 COUNTRY OF REF DOCUMENT : US
WO11073272 A1	20130109	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 10795313 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: ACCELERATOR COMPOSITION

Abstract: Source: US2012270970A A process for producing solid compositions containing calcium silicate hydrate (C-S-H) and a water-soluble comb polymer which is suitable as plasticizer for hydraulic binders, wherein the following process steps are carried out: a) contacting of an aqueous C-S-H-containing suspension with at least one comb polymer, b) optionally setting a suitable solids content of the product from step a) by dilution with water and c) drying of the product from step a) or b). The process products which can be obtained, the use thereof in building material mixtures, in particular, containing cement, the use as grinding aid in the production of cement and corresponding building material mixtures are likewise provided.

Classifications:

International (IPC 8-9): C04B14/04 C04B14/10 C04B18/08 C04B18/14 C04B22/00 C04B24/16 C04B24/26 C04B24/32 C04B28/04 C04B28/06 C04B28/14 C04B40/00 C04B7/02 C04B7/32 C08K3/34 (Advanced/Invention); C04B103/00 C04B103/12 (Advanced/Non-invention)

CPC: C04B28/04 C04B7/02 C04B7/32 C04B14/043 C04B14/106 C04B14/108 C04B18/08 C04B18/141 C04B18/146 C04B22/0013 C04B24/163 C04B24/2647 C04B28/06 C04B28/14 C04B40/0042 C04B2103/0088 C04B2103/12 C08K3/34 Y02W30/92 Y02W30/94

European: C04B28/04 C04B28/06 C04B28/14 C04B40/00D4B

US: 1/1 524/456 524/5

Family:

Publication number	Publication date	Application number	Application date
US2012270970 AA	20121025	US20120451059	20120419
US9434648 BB	20160906	US20120451059	20120419

Priority:

US20110477765P 20110421 US20120451059 20120419

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): BICHLER MANFRED ; CONSTRUCTION RES AND TECH GMBH ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH ; HESSE CHRISTOPH

Inventor(s): (std): BICHLER MANFRED ; HESSE CHRISTOPH

Agent(s): SALVATORE A; JOSEPH G; CURATOLO SIDOTI CO LPA

Legal status (INPADOC)

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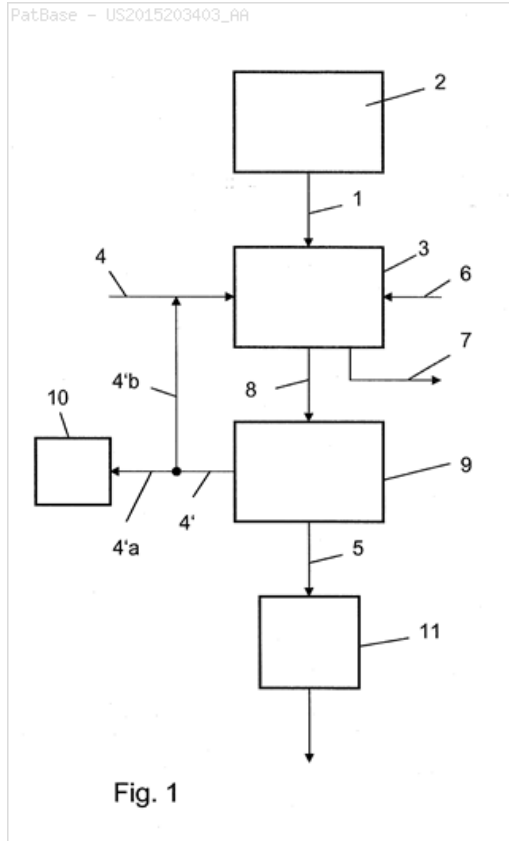
Patent	Date recorded	Event group	Code	Event	Details
US2012270970 AA	20121025	LSPB	+	published / reissued	
US2012270970 AA	20120521	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BICHLER, MANFRED; HESSE, CHRISTOPH; REEL/FRAME:028240/0915 EFFECTIVE DATE : 20120503
US9434648 BB	20160906	LSGT	+	granted / extensions (spc, cpc, pte)	
US9434648 BB	20160729	LSFE	+PPV1	Publications -- Issue Fee Payment Verified	

Title: METHOD OF PRODUCING HYDRATION-ACCELERATING SEEDS TO BE USED AS AN ADDITIVE FOR CEMENT AND/OR CONCRETE

Abstract: Source: US2015203403A In accordance with the invention, hydration-accelerating seeds composed of CSH phases or AFt/AFM phases or hemiacarbonate or monocarbonate phases, or of a mixture of two or more of these phases, are used as an admixture for cement and/or concrete, the hydration-accelerating seeds having been obtained as follows: a. using hot meal and/or bypass dust from a cement production operation as starting material, b. producing a suspension by mixing the starting material with an aqueous solution, until a solid consisting of hydration-accelerating seeds is formed, and c. removing the solid consisting of hydration-accelerating seeds from the aqueous solution.

Classifications:

International **IPC 8-9:** C04B103/12 C04B103/14 C04B22/00
C04B22/06 C04B22/10 (Advanced/Invention);
C04B103/10 C04B103/12 C04B103/14 (Advanced/Non-invention)
CPC: C04B2103/12 C04B2103/14 Y02W30/95 C04B22/10
C04B22/064 C04B22/0086 C04B2103/10 Y02P40/121
US: 106/819



Family:

Publication number	Publication date	Application number	Application date
DE102012106658 B3	20130926	DE201210106658	20120723
EP2874978 A1	20150527	EP20130742415	20130719
US2015203403 AA	20150723	US20130416919	20130719
WO14016209 A1	20140130	WO2013EP65280	20130719

Priority:

DE201210106658 20120723 WO2013EP65280 20130719

Probable Assignee: THYSSENKRUPP INDUSTRIAL SOLUTIONS AG

Assignee(s): (std): THYSSENKRUPP IND SOLUTIONS AG ; THYSSENKRUPP RESOURCE TECHNOLOGIES AG ;
THYSSENKRUPP RESOURCE TECHNOLOGIES GMBH

Assignee(s): THYSSENKRUPP INDUSTRIAL SOLUTIONS AG

Inventor(s): (std): ENDERS MICHAEL

Agent(s): THYSSENKRUPP IP SERVICES AG; TETZNER MICHAEL ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VV VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE102012106658 B3	20130926	LSGT	+	granted / extensions (spc, cpc, pte)	
DE102012106658 B3	20120723	LSES	+R012	REQUEST FOR EXAMINATION VALIDLY FILED	
DE102012106658 B3	20130724	LSES	R016	RESPONSE TO EXAMINATION COMMUNICATION	

DE102012106658 B3	20130729	LSGT	+R018	GRANT DECISION BY EXAMINATION SECTION/EXAMINING DIVISION	
DE102012106658 B3	20131002	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	OWNER NAME : THYSSENKRUPP INDUSTRIAL SOLUTIONS AG, DE DESCRIPTION : FORMER OWNER: THYSSENKRUPP POLYSIUS AG, 59269 BECKUM, DE EFFECTIVE DATE : 20130626
DE102012106658 B3	20131002	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	OWNER NAME : THYSSENKRUPP RESOURCE TECHNOLOGIES GMBH, DE DESCRIPTION : FORMER OWNER: THYSSENKRUPP POLYSIUS AG, 59269 BECKUM, DE EFFECTIVE DATE : 20130626
DE102012106658 B3	20131002	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	OWNER NAME : THYSSENKRUPP RESOURCE TECHNOLOGIES GMBH, DE DESCRIPTION : FORMER OWNER: THYSSENKRUPP RESOURCE TECHNOLOGIES AG, 59269 BECKUM, DE EFFECTIVE DATE : 20130808
DE102012106658 B3	20131002	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	OWNER NAME : THYSSENKRUPP INDUSTRIAL SOLUTIONS AG, DE DESCRIPTION : FORMER OWNER: THYSSENKRUPP RESOURCE TECHNOLOGIES AG, 59269 BECKUM, DE EFFECTIVE DATE : 20130808
DE102012106658 B3	20140320	LSGT	+R020	PATENT GRANT NOW FINAL	EFFECTIVE DATE : 20131228
DE102012106658 B3	20140904	LSAS	R081	CHANGE OF APPLICANT/PATENTEE	OWNER NAME : THYSSENKRUPP INDUSTRIAL SOLUTIONS AG, DE DESCRIPTION : FORMER OWNER: THYSSENKRUPP RESOURCE TECHNOLOGIES GMBH, 59269 BECKUM, DE EFFECTIVE DATE : 20140729
EP2874978 A1	20150527	LSPB	+	published / reissued	
EP2874978 A1	20150527	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150122
EP2874978 A1	20161207	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20161103
EP2874978 A1	20170125	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 103/10 20060101ALI20161219BHEP
EP2874978 A1	20170125	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 22/10 20060101ALI20161219BHEP
EP2874978 A1	20170125	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 22/00 20060101AFI20161219BHEP
EP2874978 A1	20170125	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 103/14 20060101ALI20161219BHEP
EP2874978 A1	20170125	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 103/12 20060101ALI20161219BHEP
EP2874978 A1	20170125	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 22/06 20060101ALI20161219BHEP
EP2874978 A1	20170301	LSGT	+INTG	ANNOUNCEMENT OF	EFFECTIVE DATE : 20170202

				INTENTION TO GRANT	
US2015203403 AA	20150723	LSPB	+	published / reissued	
US2015203403 AA	20150225	LSAS	AS	ASSIGNMENT	OWNER NAME : THYSSENKRUPP INDUSTRIAL SOLUTIONS AG, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ENDERS, MICHAEL; REEL/FRAME:035024/0434 EFFECTIVE DATE : 20150217
US2015203403 AA	20161212	LSES	NFA1	Non Final Action Mailed	
WO14016209 A1	20140130	LSPB	+	published / reissued	
WO14016209 A1	20150123	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 14416919 COUNTRY OF REF DOCUMENT : US

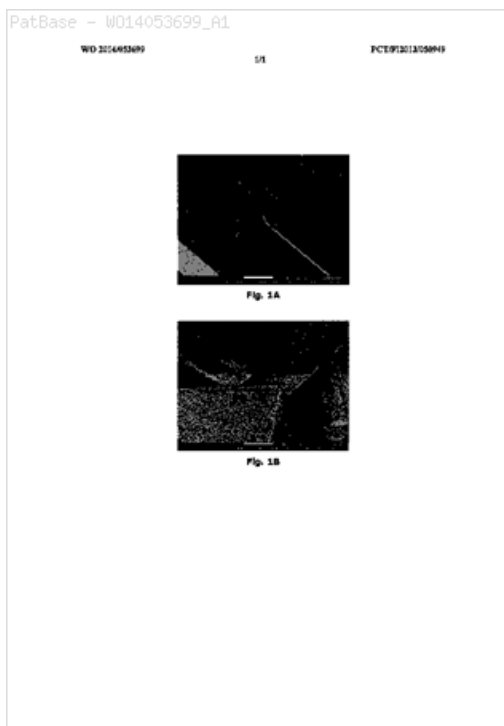
Title: METHOD FOR PRODUCING CALCIUM SILICATE HYDRATE COATED PARTICLES AND USE THEREOF

Abstract: The invention relates to a method for producing calcium silicate hydrate coated particles, said method comprising the steps where, in the first step the specific surface area of substrate particles is measured, in the second step an aqueous mixture is formed of water, substrate and at least one Si-compound, followed by agitation, and in the third step at least one Ca-compound is added to the mixture obtained in the second step, followed by agitation to yield an aqueous suspension comprising calcium silicate hydrate coated particles. The invention also relates to compositions and uses of the obtained calcium silicate hydrate coated particles.

Classifications:

International (IPC 8-9): C01B33/24 C04B20/10 C04B22/08 C09C3/06 (Advanced/Invention)

CPC: C04B40/0039 C04B2103/14 C04B22/0086 C04B20/1077 Y02W30/92 Y02W30/94 C04B20/10 C09C3/063



Family:

Publication number	Publication date	Application number	Application date
FI124295 B	20140613	FI20120006025	20121002
FI20126025 A	20140403	FI20120006025	20121002
WO14053699 A1	20140410	WO2013FI50949	20131001

Priority:

FI20120006025 20121002

Probable Assignee: TEKNOLOGIAN TUTKIMUSKESKUS VTT

Assignee(s): (std): TEKNOLOGIAN TUTKIMUSKESKUS VTT

Inventor(s): (std): KRONLOEF ANNA ; VEHMAS TAPIO

Agent(s): BOCO IP OY AB

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
FI124295 B	20140613	LSPB	+	published / reissued	
FI124295 B	20140613	LSGT	+FG	Patent granted	REF DOCUMENT NUMBER : 124295 COUNTRY OF REF DOCUMENT : FI KIND CODE OF REF DOCUMENT : B DESIGNATED STATE(S) :
FI124295 B	20160523	LSLE	-MM	PATENT LAPSED	
FI20126025 A	20140403	LSPB	+	published / reissued	
WO14053699 A1	20140410	LSPB	+	published / reissued	
WO14053699 A1	20150402	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

WO14053699 A1	20151028	LSNE	-122	EP: PCT APPLICATION NON-ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 13843862 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1
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Title: CURABLE HYDRAULIC BINDER-BASED CEMENT MATERIAL INTENDED TO BE USED AT LOW TEMPERATURES

Abstract: Source: US2015329422A Cement material, curable in the presence of water and including a hydraulic binder composition, which contains a mixture of hydraulic binders and a mixture of sulphate sources, wherein the hydraulic binder mixture includes: at least one hydraulic binder containing an alite-type mineralogical phase and at least one hydraulic binder containing an aluminate-type mineralogical phase, mainly consisting of yeelimite (C4A3\$) or a mixture of yeelimite and calcium monoaluminate (CA), the mixture of sulphate sources containing at least one sulphate source with a solubility of <4 g·L-1, and at least one sulphate source with a solubility>4 g·L-1, the cement material optionally including mineral additions, fine granulates, large granulates and additives. The curable cement material is useful as a material capable of setting in cold weather, in particular a concrete, a mortar, a grout, a coating or a cement paste to be used at a temperature of -10 degrees centigrade to +5 degrees centigrade

Classifications:

International (IPC 8-9): C04B111/70 C04B111/76 C04B28/02 C04B28/04 C04B28/06 C04B28/16 C04B7/02 C04B7/32 (Advanced/Invention); C04B111/70 C04B111/76 (Advanced/Non-invention)

CPC: C04B7/32 C04B7/02 C04B28/04 C04B28/06 C04B28/065 C04B28/16 C04B2111/70 C04B2111/76 Y02P40/148 C04B7/323 C04B22/148 C04B24/26 C04B2103/12 C04B2103/14 C04B2103/22 C04B2103/30 C04B2103/304 C04B2103/32 C04B2103/44 C04B2103/46 C04B2103/50 C04B2103/54 C04B2103/58 C04B7/3453 C04B22/143 C04B22/149 C04B24/38 C04B24/383

US: 1/1 106/695

Family:

Publication number	Publication date	Application number	Application date
CA2893449 AA	20150602	CA20132893449	20131216
DE602013010492 D1	20161006	DE201360010492T	20131216
DK2935146 T3	20161212	DK20130824609T	20131216
EP2935146 A1	20151028	EP20130824609	20131216
EP2935146 B1	20160817	EP20130824609	20131216
ES2601490 T3	20170215	ES20130824609T	20131216
FR2999565 A1	20140620	FR20120062226	20121218
FR2999565 B1	20160226	FR20120062226	20121218
PT2935146 T	20161025	PT20130824609T	20131216
TR201616470 T4	20161221	TR20160016470T	20131216
US2015329422 AA	20151119	US20130653107	20131216
US9353002 BB	20160531	US20130653107	20131216
WO14096649 A1	20140626	WO2013FR53085	20131216

Priority:

EP20130824609 20131216 FR20120062226 20121218 WO2013FR53085 20131216

Probable Assignee: FRANCAIS CEMENTS

Assignee(s): (std): CEMENTS FRANCAIS ; FRANCAIS CEMENTS

Assignee(s): GRELAUD JEAN PIERRE

Inventor(s): (std): GRELAUD JEAN PIERRE ; JEAN PIERRE GRELAUD

Agent(s): GOUDREAU GAGE DUBUC ; LE CLOIREC CLAUDINE; LEHMANN MARIA ISABEL; IPSILON BREMA LOYER; TOLGA CAYLAK; SOFER AND HAROUN LLP; LE CLOIREC CLAUDINE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
CA2893449 AA	20150602	LSPB	+	published / reissued	
DK2935146 T3	20161212	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2935146 A1	20151028	LSPB	+	published / reissued	
EP2935146 A1	20151028	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20150612
EP2935146 A1	20160504	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 7/32 20060101ALI20160330BHEP
EP2935146 A1	20160504	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/16 20060101ALI20160330BHEP
EP2935146 A1	20160504	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 111/76 20060101ALI20160330BHEP

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EP2935146 A1	20160504	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/06 20060101ALI20160330BHEP
EP2935146 A1	20160504	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 111/70 20060101ALI20160330BHEP
EP2935146 A1	20160518	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20160421
EP2935146 A1	20160817	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D TEXT : NOT ENGLISH
EP2935146 A1	20160831	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2935146 A1	20160907	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT: FRENCH
EP2935146 A1	20160915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 820886 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20160915
EP2935146 A1	20161006	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 602013010492 COUNTRY OF REF DOCUMENT : DE
EP2935146 A1	20161222	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 4
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EP2935146 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED

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EP2935146 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RS NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817
EP2935146 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DK PAYMENT DATE : 20161221 YEAR OF FEE PAYMENT : 4
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EP2935146 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20161213 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : NL PAYMENT DATE : 20161221 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170215	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A REF DOCUMENT NUMBER : 2601490 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T3 DESIGNATED STATE(S) : EFFECTIVE DATE : 20170215
EP2935146 A1	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LV NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817
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EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20161231 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20161221 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20161222 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BG PAYMENT DATE : 20161223 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20161221 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GR PAYMENT DATE : 20161221 YEAR OF FEE PAYMENT : 4

EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20161213 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : RO PAYMENT DATE : 20161124 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20161215 YEAR OF FEE PAYMENT : 4
EP2935146 A1	20170322	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : RO REF LEGAL EVENT CODE : EPE
EP2935146 A1	20170412	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20160402867 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20170222
EP2935146 A1	20170428	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20160817
EP2935146 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20161119 YEAR OF FEE PAYMENT : 4
EP2935146 B1	20160817	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2601490 T3	20170215	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2999565 A1	20140620	LSPB	+	published / reissued	
FR2999565 A1	20151221	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
FR2999565 A1	20161222	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 5
FR2999565 B1	20160226	LSGT	+	granted / extensions (spc, cpc, pte)	
PT2935146 T	20161025	LSGT	+	granted / extensions (spc, cpc, pte)	
TR201616470 T4	20161221	LSGT	+	granted / extensions (spc, cpc, pte)	
US2015329422 AA	20151119	LSPB	+	published / reissued	
US2015329422 AA	20150617	LSAS	AS	ASSIGNMENT	OWNER NAME : CIMENTS FRANCAIS, FRANCE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:GRELAUD, JEAN- PIERRE; REEL/FRAME:035854/0422 EFFECTIVE DATE : 20150512
US9353002 BB	20160531	LSGT	+	granted / extensions (spc, cpc, pte)	
US9353002 BB	20151016	LSES	NFA1	Non Final Action Mailed	
WO14096649 A1	20140626	LSPB	+	published / reissued	
WO14096649 A1	20150602	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2893449 COUNTRY OF REF DOCUMENT : CA
WO14096649 A1	20150617	LSNP	+WWE	WIPO INFORMATION:	REF DOCUMENT NUMBER : 14653107

				ENTRY INTO NATIONAL PHASE	COUNTRY OF REF DOCUMENT : US
WO14096649 A1	20150618	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: AQUEOUS SUSPENSION OF INORGANIC PARTICLES, METHOD FOR MANUFACTURING SUSPENSION AND USE OF SUSPENSION

Abstract: The invention relates to an aqueous suspension, which comprises inorganic particles and has dry solids content of at least 20 weight- percent. The suspension is produced by obtaining or forming an aqueous starting suspension of inorganic particles, adding a water-soluble silicate and a water-soluble calcium source to the aqueous suspension of inorganic particles, and mixing the suspension, whereby a coating comprising calcium silicate hydrate is formed on at least a part of the surface of the inorganic particles. The suspension, when used for manufacture of concrete comprising Portland cement binder and inorganic aggregates, in an amount of 1 – 12 weight- percent, based on the weight of Portland cement binder, increases the hydration reaction speed of the concrete by at least 5 percent, compared to a concrete not containing said suspension.

Classifications:

International (IPC 8-9): C04B103/14 C04B20/10 C04B40/00 (Advanced/Invention);
C04B103/14 (Advanced/Non-invention)

CPC: C04B40/0039 C04B20/1077 C04B2103/14 Y02W30/92 Y02W30/94 Y02W30/95 C04B2103/10

Family:

Publication number	Publication date	Application number	Application date
FI126073 B	20160615	FI20130005978	20130930
FI20135978 A	20150331	FI20130005978	20130930
WO15044530 A1	20150402	WO2014FI50743	20140930

Priority:

FI20130005978 20130930

Probable Assignee: NORDKALK OY AB

Assignee(s): (std): NORDKALK OY AB

Inventor(s): (std): ENGSTROEM CONNY ; LIEWENDAHL JOHNNY ; NORDENSWAN ERIK ; SOEDERGARD MIKAEL ;
SOMERVUORI ERNO

Agent(s): TURUN PATENTTITOIMISTO OY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR
CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID
IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN
MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG
SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
FI126073 B	20160615	LSPB	+	published / reissued	
FI126073 B	20160615	LSGT	+FG	Patent granted	REF DOCUMENT NUMBER : 126073 COUNTRY OF REF DOCUMENT : FI KIND CODE OF REF DOCUMENT : B DESIGNATED STATE(S) :
FI20135978 A	20150331	LSPB	+	published / reissued	
WO15044530 A1	20150402	LSPB	+	published / reissued	
WO15044530 A1	20160330	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO15044530 A1	20161026	LSNE	-122	EP: PCT APPLICATION NON- ENTRY IN EUROPEAN PHASE	REF DOCUMENT NUMBER : 14789587 COUNTRY OF REF DOCUMENT : EP KIND CODE OF REF DOCUMENT : A1

Title: TRACEABLE WELL CEMENT COMPOSITIONS AND METHODS

Abstract: Source: US5783822A The present invention provides improved traceable well cement compositions and methods. The compositions are basically comprised of hydraulic cement, sufficient water to form a pumpable slurry and a normally non-radioactive tracer compound which becomes radioactive and emits detectible rays over a relatively short time period when exposed to neutrons. The methods of the invention relate to cementing a zone in a well and subsequently detecting the subterranean location of the cement composition therein. A traceable well cement composition of the invention is formed and introduced into a subterranean zone to be cemented. Neutrons are then emitted from a source in the well so that the tracer compound emits detectible rays, the rays are detected and the location of the cement composition in the well is determined.

Classifications:

International (IPC 8-9): C04B22/00 C04B28/04 C04B40/00 C09K8/46 E21B33/138 E21B47/00 E21B47/10

G01N23/222 (Advanced/Invention);
C04B22/00 C04B28/00 C04B40/00 C09K8/42 E21B47/00 E21B47/10 (Core/Invention)

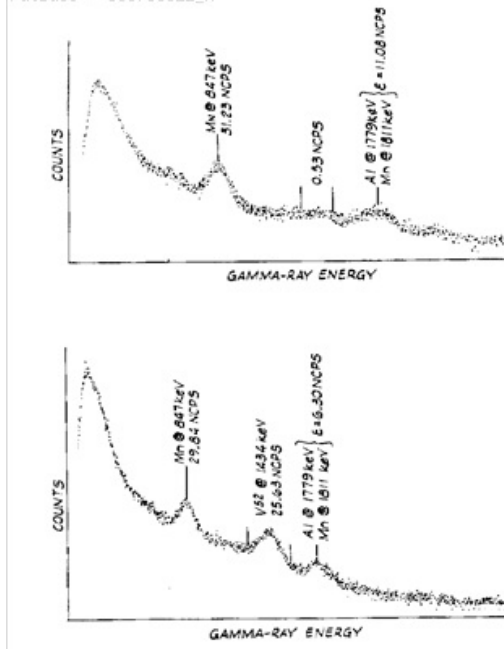
International (IPC 1-7): C04B28/04 C04B40/00 E21B33/138 E21B47/10 G01N23/222 G01V5/00 G01V5/10

CPC: C04B22/00 C04B28/04 C04B40/0096 C04B2111/00862 C09K8/46 E21B47/0005 E21B47/1015

European: C04B22/00 C04B28/04 C04B40/00Z C09K8/46 E21B47/00F E21B47/10G M04B111/00T58

US: 250/259 250/302

PatBase - US5783822_R

**Family:**

Publication number	Publication date	Application number	Application date
CA2192890 AA	19970615	CA19962192890	19961213
EP0779409 A1	19970618	EP19960309125	19961213
NO965327 A	19970616	NO19960005327	19961212
NO965327 A0	19961212	NO19960005327	19961212
US5783822 A	19980721	US19970857845	19970516

Priority:

CA19962192890 19961213 US19950572339 19951214 US19970857845 19970516
US19960734316 19961021

Probable Assignee: HALLIBURTON ENERGY SERVICES INC

Assignee(s): (std): HALLIBURTON CO ; HALLIBURTON ENERGY SERV INC

Assignee(s): HALLIBURTON ENERGY SERVICES INC ; HEATHMAN JAMES F ; HALLIBURTON COMPANY ; BUCHANAN RONNIE J ; CHATTERJI JITEN ; HALIBURTON CO

Inventor(s): (std): BUCHANAN RONNIE J ; CHATTERJI JITEN ; HEATHMAN JAMES F

Agent(s): SWABEY OGILVY RENAULT

Designated states: DE FR GB IT NL

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2192890 AA	19970615	LSPB	+	published / reissued	
CA2192890 AA	20001213	LSLE	-FZDE	DEAD	
EP0779409 A1	19970618	LSPB	+	published / reissued	
EP0779409 A1	19970917	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19970711
EP0779409 A1	19990217	LSWD	-18W	WITHDRAWN	WITHDRAWEL DATE : 19981216
NO965327 A	19970616	LSPB	+	published / reissued	
US5783822 A	19980721	LSGT	+	granted / extensions	

(spc, cpc, pte)					
US5783822 A	19970808	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:BUCHANAN, ONNIE J.; CHATTERJI, JITEN; HEATHMAN, JAMES F.; REEL/FRAME:008644/0864; SIGNING DATES FROM 19970723 TO 19970731
US5783822 A	20020102	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5783822 A	20051220	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5783822 A	20091222	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

Title: CONCRETE ADMIXTURE COMPOSITIONS

Abstract: Source: US5176753A A chloride-free admixture for use as a cold weather (e.g., 13 DEG F. to 40 DEG F.) concrete set accelerator. The admixtures comprise; 1) at least one soluble inorganic salt having freezing point depressant properties, 2) at least one water reducing dispersant, e.g., superplasticizer, 3) at least one inorganic early set and strength accelerator, and optionally, 4) at least one inorganic set accelerator.

Classifications:

International (IPC 8-9): C04B22/08 C04B24/12 C04B24/16 C04B24/22 C04B24/30 C04B28/02 C04B40/02 (Advanced/Invention); C04B24/00 C04B28/00 (Core/Invention)

International (IPC 1-7): C04B22/04 C04B22/08 C04B22/10 C04B22/14 C04B24/00 C04B24/04 C04B24/12 C04B24/14 C04B24/16 C04B24/22 C04B24/30 C04B28/02 C04B28/04 C04B28/08 C04B40/02

CPC: C04B2103/12 C04B2111/76 C04B28/04 C04B40/0039 C04B2111/1062 C04B2111/29 C04B24/12 C04B28/02

European: C04B24/12 C04B28/02 M04B103/12 M04B111/76

US: 106/724 106/725 106/727 106/728 106/802 106/808 106/809 106/810 106/819 106/822 106/823

PatBase - CA1278797_A1

**SUBSTITUTE
REPLACEMENT**

SECTION is not Present

Cette Section est Absente

Family:

Publication number	Publication date	Application number	Application date
AT235987 A	19910415	AT19870002359	19870918
AT393498 B	19911025	AT19870002359	19870918
AU198778480 A1	19880324	AU19870078480	19870917
AU592013 B2	19891221	AU19870078480	19870917
BE1002419 AE	19910205	BE19870001031	19870914
CA1278797 A1	19910108	CA19870547111	19870917
CH675716 A	19901031	CH19870003537	19870914
DE3730527 A1	19880324	DE19873730527	19870911
ES2005013 AF	19890216	ES19870002679	19870917
FR2604170 A1	19880325	FR19870012734	19870914
FR2604170 B1	19921106	FR19870012734	19870914
GB2195328 A1	19880407	GB19870021701	19870915
GB2195328 B2	19900418	GB19870021701	19870915
GB8721701 A0	19871021	GB19870021701	19870915
IT1211786 A	19891103	IT19870048397	19870917
IT8748397 A0	19870917	IT19870048397	19870917
JP63089445 A2	19880420	JP19870232693	19870918
US5176753 A	19930105	US19910790950	19911112

Priority:

CA19870547111 19870917	US19860909524 19860919	US19900527392 19900523
US19890420204 19891012	US19890322277 19890310	US19870091238 19870831
US19910730321 19910715	US19900619150 19901127	US19910790950 19911112

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): BROOK JOHN W ; SANDOZ AG ; SANDOZ SA ; SANDOZ LTD

Assignee(s): SANDOZ ERFINDUNGEN VERWALTUNGSGESELLSCHAFT M B H ; SANDOZ PATENT GMBH 7850 LOERRACH DE ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH ; MBT HOLDING AG ; NOVARTIS AG ; S A SANDOZ ; SANDOZ A G

Inventor(s): (std): BROOK JOHN W ; JIYON DABURIYU BURUTSUKU

Inventor(s): JOHN W BROOK

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; KIRBY EADES GALE BAKER

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
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AT235987 A	19910415	LSPB	+	published / reissued	
AT393498 B	19911025	LSGT	+	granted / extensions (spc, cpc, pte)	
AT393498 B	19981215	LSLE	-ELJ	CEASED DUE TO NON- PAYMENT OF THE ANNUAL FEE	
AU198778480 A1	19880324	LSPB	+	published / reissued	
AU592013 B2	19891221	LSGT	+	granted / extensions (spc, cpc, pte)	
BE1002419 AE	19910205	LSPB	+	published / reissued	
BE1002419 AE	19971231	LSAS	CA	CHANGE OF PATENT HOLDER'S ADDRESS	
BE1002419 AE	19971231	LSAS	CH	CHANGE OF HOLDER	
BE1002419 AE	19990331	LSLE	-RE	LAPSED	OWNER NAME : MBT HOLDING A.G. EFFECTIVE DATE : 19980930
CA1278797 A1	19910108	LSGT	+	granted / extensions (spc, cpc, pte)	
CA1278797 A1	20080108	LSLE	-MKEX	EXPIRY	
CH675716 A	19901031	LSGT	+	granted / extensions (spc, cpc, pte)	
CH675716 A	19971114	LSAS	PUE	ASSIGNMENT	OWNER NAME : SANDOZ AG TRANSFER- MBT HOLDING AG
CH675716 A	19990514	LSLE	-PL	PATENT CEASED	
DE3730527 A1	19880324	LSPB	+	published / reissued	
DE3730527 A1	19941103	LSES	+8110	REQUEST FOR EXAMINATION PARAGRAPH 44	
DE3730527 A1	19971002	LSAS	8127	NEW PERSON/NAME/ADDRESS OF THE APPLICANT	OWNER NAME : MBT HOLDING AG, ZUERICH, CH
DE3730527 A1	19980312	LSWD	-8130	WITHDRAWAL	
ES2005013 AF	19890216	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2005013 AF	19980401	LSAS	+PC1A	TRANSFER GRANTED	
ES2005013 AF	20010116	LSLE	-FD1A	PATENT LAPSED	EFFECTIVE DATE : 20001204
FR2604170 A1	19880325	LSPB	+	published / reissued	
FR2604170 A1	19980213	LSAS	TP	TRANSMISSION OF PROPERTY	
FR2604170 A1	19990723	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2604170 B1	19921106	LSGT	+	granted / extensions (spc, cpc, pte)	
GB2195328 A1	19880407	LSPB	+	published / reissued	
GB2195328 A1	19990505	LSLE	-PCNP	PATENT CEASED THROUGH NON- PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 19980915
GB2195328 B2	19900418	LSGT	+	granted / extensions (spc, cpc, pte)	
IT1211786 A	19891103	LSGT	+	granted / extensions (spc, cpc, pte)	
IT1211786 A	19991027	LSFE	TA	FEE PAYMENT DATE (SITUATION AS OF PRS-DATE), DATA COLLECTED SINCE 19931001	EFFECTIVE DATE : 19960927
JP63089445 A2	19880420	LSPB	+	published / reissued	
US5176753 A	19930105	LSGT	+	granted / extensions (spc, cpc, pte)	
US5176753 A	19921027	LSAS	AS	ASSIGNMENT	OWNER NAME : SANDOZ LTD., SWITZERLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST.; ASSIGNOR: BROOK, JOHN W.; REEL/FRA: 006285/0855 EFFECTIVE DATE : 19921014
US5176753 A	19960701	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5176753 A	20000628	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8

US5176753 A	20031219	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:DEGUSSA CONSTRUCTION CHEMICALS (EUROPE) AG FORMERLY KNOWNAS MBT HOLDING AG; REEL/FRAME:014788/0877 EFFECTIVE DATE : 20031107
US5176753 A	20040630	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

Title: Admixture for minimizing the presence of surface dust on cement and concrete structures

Abstract: Source: US2003209170A An admixture for minimizing or preventing dust on surfaces of cured cement and concrete structures comprises a shrinkage reducing additive in combination with a fatty alcohol. Cementitious compositions containing the admixture, and methods for reducing dusting on cement structures, is also described.

Classifications:

International (IPC 8-9): C04B24/02 C04B24/32 C04B28/02 C04B28/04 C04B40/00 (Advanced/Invention); C04B103/60 (Advanced/Non-invention)

International (IPC 1-7): C04B103/60 C04B24/02 C04B24/08 C04B24/32 C04B28/02

CPC: C04B24/02 C04B24/026 C04B24/32 C04B28/04 C04B40/0039 C04B2103/0075 C04B2103/58 C04B2111/34 C04B2111/62

European: C04B24/02 C04B24/02B C04B24/02F C04B24/32 C04B28/04 C04B40/00D4 M04B103/00W8 M04B103/58 M04B111/34 M04B111/62

US: 106/696 106/708 106/708S 106/724 106/724S 106/778 106/790 106/790S 106/795 106/795S 106/802 106/802S 106/823

Family:

Publication number	Publication date	Application number	Application date
AT485247 E	20101115	AT20010924336T	20010326
AU2001250998 AA	20011015	AU20010250998	20010326
AU200150998 A5	20011015	AU20010050998	20010326
CA2402699 AA	20020917	CA20012402699	20010326
CA2402699 C	20100525	CA20012402699	20010326
DE60143316 D1	20101202	DE20016043316	20010326
EP1358136 A2	20031105	EP20010924336	20010326
EP1358136 A4	20071031	EP20010924336	20010326
EP1358136 B1	20101020	EP20010924336	20010326
ES2352319 T3	20110217	ES20010924336T	20010326
JP2004501045 T2	20040115	JP20010572431T	20010326
JP4796730 B2	20111019	JP20010572431T	20010326
US2003209170 AA	20031113	US20020221248	20021202
US6849118 BB	20050201	US20020221248	20021202
WO0174733 A2	20011011	WO2001US09655	20010326
WO0174733 A3	20030904	WO2001US09655	20010326

Priority:

US20000193978P 20000331 US20020221248 20021202 WO2001US09655 20010326

Probable Assignee: WR GRACE AND CO CONN

Assignee(s): (std): GRACE W R AND CO ; HAZRATI KATI ; KERKAR AWDHOOT

Assignee(s): KERKAR AWDHOOT V ; W R GRACE AND CO CONN ; WR GRACE AND CO ; W R GRACE AND CO ; WR GRACE AND CO CONN ; W R GRACE AND CO CONN COLUMBIA

Inventor(s): (std): HAZRATI KATI ; KERKAR AWDHOOT ; KERKAR AWDHOOT V

Inventor(s): KATI HAZRATI ; AWDHOOT KERKAR

Agent(s): SMART AND BIGGAR; BENSON JOHN EVERETT

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CR CU CY CZ DE DK DM DZ EE ES FI FR GA GB GD GE GH GM GN GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT485247 E	20101115	LSGT	+	granted / extensions (spc, cpc, pte)	
AT485247 E	20110415	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU2001250998 AA	20011015	LSPB	+	published / reissued	
AU200150998 A5	20011015	LSPB	+	published / reissued	
CA2402699 AA	20020917	LSPB	+	published / reissued	
CA2402699 AA	20020917	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2402699 AA	20051116	LSES	+EEER	EXAMINATION REQUEST	
CA2402699 AA	20140507	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20140326
CA2402699 C	20100525	LSGT	+	granted / extensions (spc, cpc, pte)	

EP1358136 A2	20031105	LSPB	+	published / reissued	
EP1358136 A2	20031105	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20020918
EP1358136 A2	20040609	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : W.R. GRACE AND CO.-CONN.
EP1358136 A2	20071031	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20071002
EP1358136 A2	20080305	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20080131
EP1358136 A2	20101020	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1358136 A2	20101029	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1358136 A2	20101124	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
EP1358136 A2	20110217	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FG2A EFFECTIVE DATE : 20110207
EP1358136 A2	20110302	LSRV	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : VDEP EFFECTIVE DATE : 20101020
EP1358136 A2	20110531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FI DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT EFFECTIVE DATE : 20101020
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EP1358136 A2	20110531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT EFFECTIVE DATE : 20101020
EP1358136 A2	20110531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT EFFECTIVE DATE : 20101020
EP1358136 A2	20110531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : IT PAYMENT DATE : 20110324 YEAR OF FEE PAYMENT : 11
EP1358136 A2	20110531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 20110331 YEAR OF FEE PAYMENT : 11
EP1358136 A2	20110729	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME- LIMIT EFFECTIVE DATE : 20101020
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				EPO	EFFECTIVE DATE : 20101020
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EP1358136 A2	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : DE PAYMENT DATE : 20110329 YEAR OF FEE PAYMENT : 11
EP1358136 A2	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : ES PAYMENT DATE : 20110328 YEAR OF FEE PAYMENT : 11
EP1358136 A2	20110729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : GB PAYMENT DATE : 20110325 YEAR OF FEE PAYMENT : 11
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EP1358136 A2	20110930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20101020
EP1358136 A2	20111031	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1358136 A2	20111117	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 60143316 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20110721
EP1358136 A2	20111130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : MC DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20110331
EP1358136 A2	20120104	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1358136 A2	20120131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20110326
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EP1358136 A2	20121128	LSLE	-GBPC	GB: EUROPEAN PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20120326
EP1358136 A2	20121221	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20121130
EP1358136 A2	20130117	LSDW	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R119 REF DOCUMENT NUMBER : 60143316 COUNTRY OF REF DOCUMENT : DE

EFFECTIVE DATE : 20121002					
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EP1358136 A2	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20110326
EP1358136 A2	20130531	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CY DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20101020
EP1358136 A2	20130710	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20130710
EP1358136 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20120327
EP1358136 A2	20130930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : TR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 20101020
EP1358136 A2	20140930	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20121002
EP1358136 B1	20101020	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2352319 T3	20110217	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2004501045 T2	20040115	LSPB	+	published / reissued	
JP2004501045 T2	20100223	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100223
JP2004501045 T2	20100519	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100518
JP2004501045 T2	20100629	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100629
JP2004501045 T2	20100922	LSRE	A521	WRITTEN	DESCRIPTION : JAPANESE

				AMENDMENT	INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100921
JP2004501045 T2	20110726	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20110726
JP2004501045 T2	20110804	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20110801
JP4796730 B2	20111019	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4796730 B2	20070310	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070309
JP4796730 B2	20070310	LSSE	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20070309
JP4796730 B2	20110714	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4796730 B2	20110726	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20110726
JP4796730 B2	20110728	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4796730 B2	20110804	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20110801
JP4796730 B2	20110805	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4796730 B2	20110808	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140805 YEAR OF FEE PAYMENT : 3
JP4796730 B2	20140805	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
US2003209170 AA	20031113	LSPB	+	published / reissued	
US6849118 BB	20050201	LSGT	+	granted / extensions (spc, cpc, pte)	
US6849118 BB	20010514	LSAS	AS	ASSIGNMENT	OWNER NAME : W.R. GRACE AND CO.-CONN., NEW YORK DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KERKAR, AWDHOOT V.; HAZRATI, KATI; REEL/FRAME:011825/0249; SIGNING DATES FROM 20010330 TO 20010405
US6849118 BB	20030310	LSAS	AS	ASSIGNMENT	OWNER NAME : W.R. GRACE AND CO.-CONN, MARYLAND DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KERKAR, AWDHOOT V.; HAZRATI, KATI; REEL/FRAME:013824/0991; SIGNING DATES FROM 20010330 TO 20010405
US6849118 BB	20080801	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6849118 BB	20130201	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6849118 BB	20130326	LSLE	-FP	EXPIRED DUE TO	EFFECTIVE DATE : 20130201

				FAILURE TO PAY MAINTENANCE FEE	
WO0174733 A2	20011011	LSPB	+	published / reissued	
WO0174733 A3	20020912	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0174733 A3	20020917	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2402699 COUNTRY OF REF DOCUMENT : CA
WO0174733 A3	20020918	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2001924336 COUNTRY OF REF DOCUMENT : EP
WO0174733 A3	20020926	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP REF DOCUMENT NUMBER : 2001 572431 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO0174733 A3	20021202	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10221248 COUNTRY OF REF DOCUMENT : US
WO0174733 A3	20031105	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2001924336 COUNTRY OF REF DOCUMENT : EP

Title: PORTLAND CEMENT COMPOSITION HAVING AN ACCELERATED SET

Abstract: Source: US3656985A A composition for quickening the setting of Portland cement constituted by 0.5 - 5 parts of alkali aluminate and 0.05 - 2 parts of hydroxylated organic acid.

Classifications:

International (IPC 8-9): C04B22/00 C04B24/06 C04B28/02

C04B28/04 (Advanced/Invention);

C04B22/00 C04B24/00 C04B28/00 (Core/Invention)

International (IPC 1-7): B28C C04B13/00 C04B13/02 C04B13/20

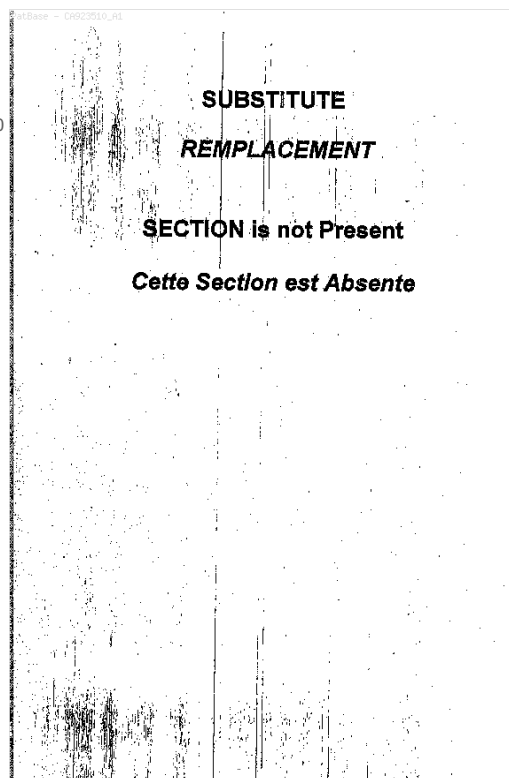
C04B13/21 C04B13/22 C04B13/24 C04B15/00 C04B31/00 C04B7/00

C04B7/32 C04B7/56

CPC: C04B22/0093 C04B28/04 C04B2103/12

European: C04B22/00R C04B28/04 M04B103/12

US: 106/315 106/713 106/728 106/90 106/95



Family:

Publication number	Publication date	Application number	Application date
AT302148 B	19721010	AT19700010844	19701202
BE759703 A1	19710517		19701201
CA923510 A1	19730327	CA19700098151	19701113
CH529701 A	19721031	CH19700017134	19701119
CS151576 B2	19731019	CS19700008141	19701202
DE2059074 A1	19710603	DE19702059074	19701201
DE2059074 B2	19770929	DE19702059074	19701201
DK137447 B	19780306	DK19700006126	19701201
DK137447 C	19780814	DK19700006126	19701201
ES386062 A1	19730316	ES19700386062	19701201
FR2070335 A5	19710910	FR19690041443	19691202
GB1283128 A	19720726	GB19700055903	19701124
HU162301 P	19730129	HU1970PO00481	19701202
IL35769 A0	19710225	IL19700035769	19701201
IL35769 A1	19730430	IL19700035769	19701201
JP51022012 B4	19760707	JP19700104016	19701125
NL7017626 A	19710604	NL19700017626	19701202
PL81259 P	19750830	PL19700144725	19701130
RO57560 P	19750215	RO19700065168	19701202
US3656985 A	19720418	US19700094157	19701201
ZA7008100 A	19710825	ZA19700008100	19701130

Priority:

FR19690041443 19691202

Probable Assignee: PROGIL

Assignee(s): (std): PROGIL

Assignee(s): FA PROGIL ; FIRMA PROGIL ; PROGIL 77 RUE DE MIROMESNIL PARIS 8E FRANCE ; PROGIL S A ; PROGIL FA ; BERNARD BONNEL ; CHRISTIAN HOVASSE

Inventor(s): (std): BERNARD BONNEL ; BONNEL B ; BONNEL BERNARD ; BONNEL BERNHARD ; CHRISTIAN HOVASSE ; HOVASSE B ; HOVASSE CHRISTIAN ; HOVASSE C

Agent(s): REINHOLD COHN AND PARTNERS

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT302148 B	19721010	LSGT	+	granted / extensions (spc, cpc, pte)	

AT302148 B	19811015	LSLE	-ELJ	CEASED DUE TO NON-PAYMENT OF THE ANNUAL FEE
BE759703 A1	19710517	LSPB	+	published / reissued
CA923510 A1	19730327	LSPB	+	published / reissued
CH529701 A	19721031	LSGT	+	granted / extensions (spc, cpc, pte)
CH529701 A	19810731	LSLE	-PL	PATENT CEASED
CS151576 B2	19731019	LSGT	+	granted / extensions (spc, cpc, pte)
DE2059074 A1	19710603	LSPB	+	published / reissued
DE2059074 A1	19780831	LSWD	-BHN	WITHDRAWAL
DE2059074 B2	19770929	LSPB	+	published / reissued
DK137447 B	19780306	LSPB	+	published / reissued
DK137447 C	19780814	LSGT	+	granted / extensions (spc, cpc, pte)
FR2070335 A5	19710910	LSGT	+	granted / extensions (spc, cpc, pte)
FR2070335 A5	19851025	LSLE	-ST	NOTIFICATION OF LAPSE
GB1283128 A	19720726	LSGT	+	granted / extensions (spc, cpc, pte)
GB1283128 A	19721206	LSGT	+PS	PATENT SEALED
GB1283128 A	19810708	LSLE	-PCNP	PATENT CEASED THROUGH NON-PAYMENT OF RENEWAL FEE
HU162301 P	19730129	LSGT	+	granted / extensions (spc, cpc, pte)
IL35769 A1	19730430	LSPB	+	published / reissued
JP51022012 B4	19760707	LSPB	+	published / reissued
NL7017626 A	19710604	LSPB	+	published / reissued
PL81259 P	19750830	LSGT	+	granted / extensions (spc, cpc, pte)
RO57560 P	19750215	LSPB	+	published / reissued
US3656985 A	19720418	LSGT	+	granted / extensions (spc, cpc, pte)
ZA7008100 A	19710825	LSGT	+	granted / extensions (spc, cpc, pte)

Title: ACCELERATOR ADMIXTURE

Abstract: Source: US2006048685A An accelerator composition for use with sprayed cementitious compositions, which is an aqueous solution or dispersion of a blend of the essential Components 1-3 Component 1-aluminium sulphate Component 2-at least one of an alkanolamine and an alkylene diamine or triamine Component 3-hydrofluoric acid optionally with at least one of Components 4-7, with the proviso that at least one of Component 4 or Component 5 be present: Component 4-at least one of sodium hydroxide, potassium hydroxide, lithium hydroxide, magnesium hydroxide, lithium carbonate, sodium carbonate, potassium carbonate, magnesium carbonate, sodium sulphate, potassium sulphate, magnesium sulphate and lithium sulphate

Classifications:

International (IPC 8-9): B05D1/02 C04B103/10 C04B111/10 C04B14/00 C04B2/00 C04B22/06 C04B22/08 C04B22/10 C04B22/12 C04B22/14 C04B22/16 C04B24/00 C04B24/04 C04B24/12 C04B28/02 C04B40/00 E04F13/02 E21D11/10 (Advanced/Invention); C04B103/10 C04B103/12 C04B111/10 C04B22/12 C04B22/14 C04B24/04 C04B28/02 C04B40/00 (Advanced/Non-invention); C04B14/00 C04B2/00 C04B22/00 C04B24/00 C04B28/00 C04B40/00 E04F13/02 E21D11/10 (Core/Invention); C04B22/08 (Core/Non-invention)

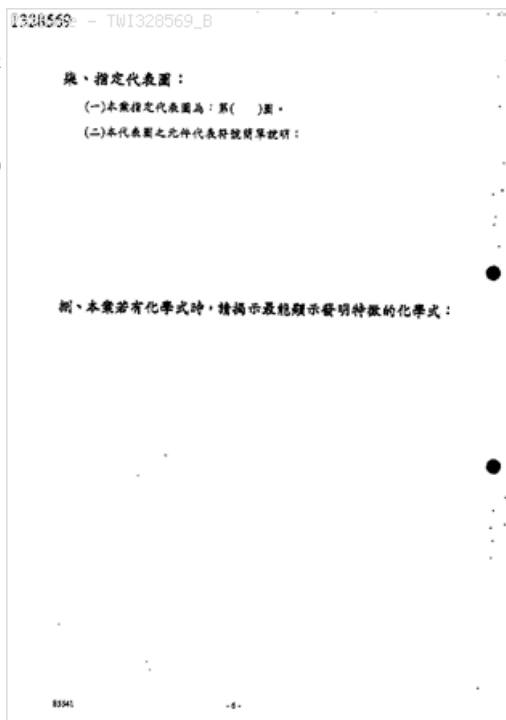
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CPC: C04B40/0039 C04B28/02 C04B2103/12 C04B2111/00155

European: C04B28/02 C04B40/00D4 M04B103/12

M04B111/00M16B

US: 106/727 106/727S 106/798 106/808 106/819 106/823 427/427 427/427.1 428/703



Family:

Publication number	Publication date	Application number	Application date
AR040220 AA	20050316	AR2003P102113	20030613
AT435845 E	20090715	AT20040712504T	20040219
AU2003237674 AA	20031231	AU20030237674	20030522
AU2003237674 BB	20081127	AU20030237674	20030522
AU2004215680 AA	20040910	AU20040215680	20040219
AU2004215680 BB	20071206	AU20040215680	20040219
BRPI0407787 A	20060214	BR2004PI07787	20040219
CA2516048 AA	20050811	CA20042516048	20040219
CN100404469 C	20080723	CN200480005173	20040219
CN1753848 A	20060329	CN200480005173	20040219
DE602004021908 D1	20090820	DE200460021908T	20040219
DE60335716 D1	20110224	DE20036035716	20030522
EP1513783 A1	20050316	EP20030735455	20030522
EP1513783 B1	20110112	EP20030735455	20030522
EP1597214 A1	20051123	EP20040712504	20040219
EP1597214 B1	20090708	EP20040712504	20040219
ES2327924 T3	20091105	ES20040712504T	20040219
ES2358992 T3	20110517	ES20030735455T	20030522
GB200213765 A0	20020724	GB20020013765	20020617
GB200304158 A0	20030326	GB20030004158	20030225
JP2004026630 A2	20040129	JP20030062114	20030307
JP2004035387 A2	20040205	JP20020359196	20021211
JP2007182378 A2	20070719	JP20070029263	20070208
JP3967279 B2	20070829	JP20030062114	20030307
JP4439805 B2	20100324	JP20020359196	20021211
JP4920440 B2	20120418	JP20070029263	20070208
KR101097568 B1	20111222	KR20057015674	20040219
KR20050012814 A	20050202	KR20047020660	20030522
KR20050107452 A	20051111	KR20057015674	20040219
MXPA05009033 A1	20051123	MX2005PA09033	20040219
NO20054394 A	20051125	NO20050004394	20050922
NO20054394 A0	20050922	NO20050004394	20050922
PE01452004 A1	20040516	PE20030000597	20030616
PT1597214 T	20090729	PT20040712504T	20040219
SI1597214 T1	20091031	SI20040031181T	20040219
TW200400928 A	20040116	TW20030116252	20030616
TWI328569 B	20100811	TW20030116252	20030616
US2006048685 AA	20060309	US20030516699	20030522

US2006137576 AA	20060629	US20040544979	20040219
US7182808 BB	20070227	US20040544979	20040219
US7198669 BB	20070403	US20030516699	20030522
WO03106375 A1	20031224	WO2003EP05456	20030522
WO04076382 A1	20040910	WO2004EP01594	20040219

Priority:

EP20040712504 20040219

GB20020013765 20020617

WO2004EP01594 20040219

GB20030004158 20030225

WO2003EP05456 20030522

JP20030062114 20030307

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): ANGELSKAAR TERJE ; CONSTR RES AND TECH GMBH ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH ; IWATA RAITA ; MBT HOLDING AG

Assignee(s): CONSTRUCTION RESEARCH AND TECHNOLOGY GMBHDE

Inventor(s): (std): ANGELSKAAR TERJE ; IWATA RAITA ; RAITA ANGELSKAAR TERJE IWATA ; RAITA IWATA ; TERJE ANGELSKAAR ; IWATA RAITA CHUO KENKYUSHO ; ANGELSKAR TERJE

Inventor(s): TERJE ANGELSKAR ; RAITA CHUO KENKYUSHO IWATA ; IWATA RAITA CHUO KENKYUSHO NMB LTD ; ANGELSKAAR TERJE IWATA RAITA

Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; CURATOLO SIDOTI CO LPA

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
AR040220 AA	20050316	LSPB	+	published / reissued	
AR040220 AA	20091029	LSGT	+FG	GRANT, REGISTRATION	
AR040220 AA	20161116	LSGT	+FG	GRANT, REGISTRATION	
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AU2003237674 AA	20031231	LSPB	+	published / reissued	
AU2003237674 AA	20090326	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2003237674 BB	20081127	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2004215680 AA	20040910	LSPB	+	published / reissued	
AU2004215680 AA	20080403	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2004215680 BB	20071206	LSGT	+	granted / extensions (spc, cpc, pte)	
BRPI0407787 A	20060214	LSPB	+	published / reissued	
BRPI0407787 A	20120724	LSES	B07A	TECHNICAL EXAMINATION (OPINION): PUBLICATION OF TECHNICAL EXAMINATION (OPINION)	
BRPI0407787 A	20130326	LSRV	B09B	DECISION: REFUSAL	
BRPI0407787 A	20131001	LSAL	B12B	APPEAL: APPEAL AGAINST REFUSAL	
CA2516048 AA	20050811	LSPB	+	published / reissued	
CA2516048 AA	20050811	LSNP	+AFNE	NATIONAL PHASE ENTRY	

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CN100404469 C	20080723	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1753848 A	20060329	LSPB	+	published / reissued	
CN1753848 A	20060329	LSPB	+C06	PUBLICATION	
CN1753848 A	20080723	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
DE602004021908 D1	20100624	LSOP	-8363	OPPOSITION AGAINST THE PATENT	
EP1513783 A1	20050316	LSPB	+	published / reissued	
EP1513783 A1	20050316	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20041109
EP1513783 A1	20050420	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20050308
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EP1513783 A1	20110114	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP1513783 B1	20110112	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1597214 A1	20051123	LSPB	+	published / reissued	
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EP1597214 A1	20070314	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20051111
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EP1597214 A1	20090304	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/02 20060101ALI20090128BHEP
EP1597214 A1	20090304	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 22/12 20060101ALI20090128BHEP
EP1597214 A1	20090708	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1597214 A1	20090715	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1597214 A1	20090805	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
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EP1597214 A1	20100512	LSOP	-26	OPPOSITION FILED	PARTYTYPE : OPPONENT OPPONENT : MAPEI S.P.A EFFECTIVE DATE : 20100407
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EP1597214 A1	20101029	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : GR NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20091009
EP1597214 A1	20101029	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MC NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON- PAYMENT OF DUE FEES LAPSED DATE : 20100301
EP1597214 A1	20120314	LSOP	-R26	OPPOSITION FILED (CORRECTION)	PARTYTYPE : OPPONENT OPPONENT : MAPEI S.P.A EFFECTIVE DATE : 20100407
EP1597214 A1	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20090708
EP1597214 A1	20120928	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20100109
EP1597214 A1	20120928	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT	COUNTRY OF REF DOCUMENT : LU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-

				INFORM. FROM NAT. OFFICE TO EPO	PAYMENT OF DUE FEES LAPSED DATE : 20100219
EP1597214 A1	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : TR NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20090708
EP1597214 A1	20130807	LSOP	-R26	OPPOSITION FILED (CORRECTION)	PARTY TYPE : OPPONENT OPPONENT : MAPEI S.P.A EFFECTIVE DATE : 20100407
EP1597214 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FI PAYMENT DATE : 20150223 YEAR OF FEE PAYMENT : 12
EP1597214 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20150213 YEAR OF FEE PAYMENT : 12
EP1597214 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20150224 YEAR OF FEE PAYMENT : 12
EP1597214 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20150225 YEAR OF FEE PAYMENT : 12
EP1597214 A1	20150430	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20150211 YEAR OF FEE PAYMENT : 12
EP1597214 A1	20150529	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SI PAYMENT DATE : 20150127 YEAR OF FEE PAYMENT : 12
EP1597214 A1	20160229	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SK PAYMENT DATE : 20160218 YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160224 YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160429	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20160321 YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20160226 YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160229 YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160226 YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160531	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20160301 YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160729	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20160502

				OFFICE	YEAR OF FEE PAYMENT : 13
EP1597214 A1	20160930	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1597214 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160229
EP1597214 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : FI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160219
EP1597214 A1	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160229
EP1597214 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160220
EP1597214 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CZ NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160219
EP1597214 A1	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : PT NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160819
EP1597214 A1	20161130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SI REF LEGAL EVENT CODE : K000 EFFECTIVE DATE : 20161013
EP1597214 A1	20161130	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP1597214 A1	20170131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : IE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160219
EP1597214 A1	20170227	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 14
EP1597214 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20170227 YEAR OF FEE PAYMENT : 14
EP1597214 A1	20170428	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20170223 YEAR OF FEE PAYMENT : 14
EP1597214 B1	20090708	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2327924 T3	20091105	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2358992 T3	20110517	LSGT	+	granted / extensions (spc, cpc, pte)	
GB200213765 A0	20040107	LSWD	-AT	APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION	

GB200304158 A0	20040526	LSWD	-AT	16(1) APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)	
JP2004026630 A2	20040129	LSPB	+	published / reissued	
JP2004035387 A2	20040205	LSPB	+	published / reissued	
JP2007182378 A2	20070719	LSPB	+	published / reissued	
JP2007182378 A2	20100703	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100702
JP2007182378 A2	20110614	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20110614
JP2007182378 A2	20111015	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111014
JP2007182378 A2	20111102	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20111014
JP2007182378 A2	20111108	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20111107
JP2007182378 A2	20111220	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2007182378 A2	20120110	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120110
JP2007182378 A2	20120112	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP2007182378 A2	20120209	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120201
JP2007182378 A2	20120210	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP2007182378 A2	20120213	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150210 YEAR OF FEE PAYMENT : 3
JP3967279 B2	20070829	LSGT	+	granted / extensions (spc, cpc, pte)	
JP3967279 B2	20040407	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20040406
JP3967279 B2	20040511	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20040407
JP3967279 B2	20050208	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20050208
JP3967279 B2	20050609	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20050608
JP3967279 B2	20050609	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20050608
JP3967279 B2	20050615	LSRE	A521	WRITTEN	DESCRIPTION : JAPANESE

				AMENDMENT	INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20050518
JP3967279 B2	20050706	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20050608
JP3967279 B2	20050719	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20050715
JP3967279 B2	20050829	LSAL	-A912	REMOVAL OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A912 EFFECTIVE DATE : 20050826
JP3967279 B2	20070209	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070208
JP3967279 B2	20070309	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20070208
JP3967279 B2	20070414	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20070413
JP3967279 B2	20070607	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20070530
JP3967279 B2	20070608	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP3967279 B2	20100527	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20100608 YEAR OF FEE PAYMENT : 3
JP3967279 B2	20100601	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20110608 YEAR OF FEE PAYMENT : 4
JP3967279 B2	20110607	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20120608 YEAR OF FEE PAYMENT : 5
JP3967279 B2	20120612	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130608 YEAR OF FEE PAYMENT : 6
JP3967279 B2	20130608	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4439805 B2	20100324	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4439805 B2	20051210	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20051209
JP4439805 B2	20051210	LSAS	A711	NOTIFICATION OF CHANGE IN APPLICANT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A711 EFFECTIVE DATE : 20051209
JP4439805 B2	20080603	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20080603
JP4439805 B2	20081204	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20081203
JP4439805 B2	20090310	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090310
JP4439805 B2	20090910	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090909

JP4439805 B2	20091126	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4439805 B2	20091208	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20091208
JP4439805 B2	20091210	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4439805 B2	20100114	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100106
JP4439805 B2	20100115	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130115 YEAR OF FEE PAYMENT : 3
JP4439805 B2	20100115	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4439805 B2	20130122	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140115 YEAR OF FEE PAYMENT : 4
JP4439805 B2	20140115	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
JP4920440 B2	20120418	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4920440 B2	20100302	LSSE	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100302
JP4920440 B2	20100703	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100702
JP4920440 B2	20110614	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20110614
JP4920440 B2	20111015	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111014
JP4920440 B2	20111102	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20111014
JP4920440 B2	20111108	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20111107
JP4920440 B2	20111220	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4920440 B2	20120110	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120110
JP4920440 B2	20120112	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4920440 B2	20120209	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120201
JP4920440 B2	20120210	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150

JP4920440 B2	20120213	LSFE	+FPAY	UTILITY MODEL RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150210 YEAR OF FEE PAYMENT : 3
JP4920440 B2	20150210	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
KR101097568 B1	20111222	LSGT	+	granted / extensions (spc, cpc, pte)	
KR101097568 B1	20081229	LSES	A201	REQUEST FOR EXAMINATION	
KR101097568 B1	20110120	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR101097568 B1	20110928	LSGT	+E701	DECISION TO GRANT OR REGISTRATION OF PATENT RIGHT	
KR101097568 B1	20111215	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR101097568 B1	20141126	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20141127 YEAR OF FEE PAYMENT : 4
KR101097568 B1	20151216	LSLE	-LAPS	LAPSE DUE TO UNPAID ANNUAL FEE	
KR20050012814 A	20050202	LSPB	+	published / reissued	
KR20050012814 A	20080519	LSES	A201	REQUEST FOR EXAMINATION	
KR20050012814 A	20090713	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20050012814 A	20091214	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20050012814 A	20110408	LSAL	J2X1	APPEAL (BEFORE THE PATENT COURT)	DESCRIPTION : APPEAL AGAINST DECISION TO DECLINE REFUSAL
KR20050107452 A	20051111	LSPB	+	published / reissued	
MXPA05009033 A1	20051123	LSPB	+	published / reissued	
MXPA05009033 A1	20080716	LSGT	+FG	GRANT OR REGISTRATION	
MXPA05009033 A1	20130809	LSLI	GD	LICENCE GRANTED	
NO20054394 A	20051125	LSPB	+	published / reissued	
PE01452004 A1	20040516	LSPB	+	published / reissued	
PE01452004 A1	20051130	LSGT	+FG	GRANT, REGISTRATION	
PE01452004 A1	20160129	LSWD	-FD	APPLICATION DECLARED VOID OR LAPSED	
PT1597214 T	20090729	LSGT	+	granted / extensions (spc, cpc, pte)	
SI1597214 T1	20091031	LSGT	+	granted / extensions (spc, cpc, pte)	
TW200400928 A	20040116	LSPB	+	published / reissued	
TWI328569 B	20100811	LSGT	+	granted / extensions (spc, cpc, pte)	
TWI328569 B	20160511	LSLE	-MM4A	ANNULMENT OR LAPSE OF PATENT DUE TO NON- PAYMENT OF FEES	
US2006048685 AA	20060309	LSPB	+	published / reissued	
US2006137576 AA	20060629	LSPB	+	published / reissued	

US7182808 BB	20070227	LSGT	+	granted / extensions (spc, cpc, pte)	
US7182808 BB	20060912	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; REEL/FRAME:018232/0930; SIGNING DATES FROM 20060908 TO 20060911
US7182808 BB	20070207	LSGT	PAT1	Patented Case	
US7182808 BB	20100824	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7182808 BB	20140822	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7198669 BB	20070403	LSGT	+	granted / extensions (spc, cpc, pte)	
US7198669 BB	20050208	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MBT HOLDING AG; REEL/FRAME:015662/0069 EFFECTIVE DATE : 20030630
US7198669 BB	20050208	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH,GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MBT HOLDING AG; REEL/FRAME:015662/0069 EFFECTIVE DATE : 20030630
US7198669 BB	20050208	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH,GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:MBT HOLDING AG; US-ASSIGNMENT DATABASE UPDATED:20100216; REEL/FRAME:15662/69 EFFECTIVE DATE : 20030630
US7198669 BB	20060912	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; REEL/FRAME:018232/0587; SIGNING DATES FROM 20060908 TO 20060911
US7198669 BB	20100927	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7198669 BB	20140929	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
WO03106375 A1	20031224	LSPB	+	published / reissued	
WO03106375 A1	20041109	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003735455 COUNTRY OF REF DOCUMENT : EP
WO03106375 A1	20041203	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003237674 COUNTRY OF REF DOCUMENT : AU
WO03106375 A1	20041217	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020047020660 COUNTRY OF REF DOCUMENT : KR
WO03106375 A1	20050202	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1020047020660 COUNTRY OF REF DOCUMENT : KR

WO03106375 A1	20050316	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003735455 COUNTRY OF REF DOCUMENT : EP
WO03106375 A1	20050729	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2006048685 COUNTRY OF REF DOCUMENT : US KIND CODE OF REF DOCUMENT : A1
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WO04076382 A1	20050718	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004215680 COUNTRY OF REF DOCUMENT : AU
WO04076382 A1	20050811	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2516048 COUNTRY OF REF DOCUMENT : CA
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WO04076382 A1	20050824	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1020057015674 COUNTRY OF REF DOCUMENT : KR
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WO04076382 A1	20050825	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 20048051737 COUNTRY OF REF DOCUMENT : CN
WO04076382 A1	20050908	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004712504 COUNTRY OF REF DOCUMENT : EP
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WO04076382 A1	20051123	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2004712504 COUNTRY OF REF DOCUMENT : EP
WO04076382 A1	20060125	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2006137576 COUNTRY OF REF DOCUMENT : US KIND CODE OF REF DOCUMENT : A1
WO04076382 A1	20060125	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10544979 COUNTRY OF REF DOCUMENT : US
WO04076382 A1	20060214	LSNP	ENP	ENTRY INTO THE	REF DOCUMENT NUMBER :

				NATIONAL PHASE IN:	PI0407787 COUNTRY OF REF DOCUMENT : BR
WO04076382 A1	20060629	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 10544979 COUNTRY OF REF DOCUMENT : US

Title: VERY FAST SETTING CEMENTITIOUS COMPOSITION

Abstract: Source: US2004040474A Extremely fast setting of cementitious compositions for producing cement-based products such as cement boards is made possible by adding an alkanolamine to a hydraulic cement such as portland cement, and forming a slurry with water under conditions that provide an initial slurry temperature of at least 90 degrees Fahrenheit. Use of alkanolamine under conditions disclosed herein allows an extremely rapid setting of the cementitious composition. Additional reactive materials may be included such as high alumina cement, calcium sulfate and a pozzolanic material such as fly ash. The extremely fast rapid set permits rapid production of cementitious products.

Classifications:

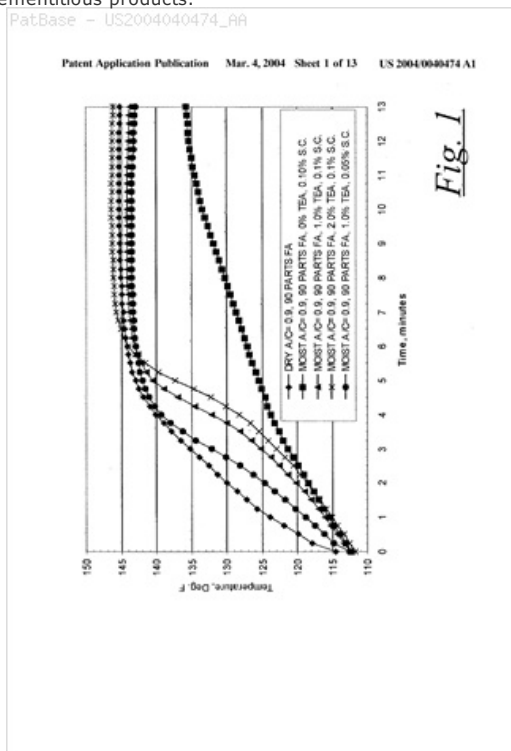
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International (IPC 1-7): C04B16/00 C04B18/08 C04B18/14 C04B22/08 C04B22/10 C04B22/14 C04B24/00 C04B24/06 C04B24/12 C04B28/04 C04B7/00 C04B7/32

CPC: Y02W30/92 Y02W30/94 C04B28/04 C04B28/06 C04B2103/12

European: C04B28/04 C04B28/06 M04B103/12

US: 106/695 106/695S 106/708 106/708S 106/727 106/781 106/781S 106/808 106/819 106/823



Family:

Publication number	Publication date	Application number	Application date
AU2003248928 AA	20040319	AU20030248928	20030710
DE60345811 D1	20140410	DE20036045811	20030710
EP1532080 A1	20050525	EP20030791571	20030710
EP1532080 A4	20101027	EP20030791571	20030710
EP1532080 B1	20140305	EP20030791571	20030710
HK1075447 A3	20051216	HK20050109651	20051031
JP2005537208 T2	20051208	JP20040532594T	20030710
US2004040474 AA	20040304	US20030414686	20030416
US6869474 BB	20050322	US20030414686	20030416
WO04020359 A1	20040311	WO2003US21565	20030710

Priority:

EP20030791571 20030710 US20020407203P 20020829 US20030414686 20030416
WO2003US21565 20030710

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): DUBEY ASHISH ; PEREZ PENA MARIANELA ; UNITED STATES GYPSUM CO

Assignee(s): UNITED STATES GYPSUM CO CHICAGO ; UNITED STATES GYPSUM COMPANY

Inventor(s): (std): DUBEY ASHISH ; PEREZ PENA MARIANELA

Inventor(s): PEREZ PENA MARIANELA GRAYSLAKE ; DUBEY ASHISH GRAYSLAKE ; MARIANELA PEREZ PENA ; ASHISH DUBEY

Agent(s): MARKS AND CLERK LUXEMBOURG LLP; FINDLAY ALICE ROSEMARY; JENKENS AND GILCHRIST; JOHN M; DAVID F

Designated states: DE FR GB

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2003248928 AA	20040319	LSPB	+	published / reissued	
AU2003248928 AA	20050519	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING	

NATIONAL PHASE					
EP1532080 A1	20050525	LSPB	+	published / reissued	
EP1532080 A1	20050525	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20040426
EP1532080 A1	20060118	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : PEREZ-PENA, MARIANELA
EP1532080 A1	20060118	LSRE	RIN1	INVENTOR (CORRECTION)	PARTYTYPE : INVENTOR INVENTOR : DUBEY, ASHISH
EP1532080 A1	20101027	LSSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20100928
EP1532080 A1	20110302	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20110131
EP1532080 A1	20131204	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 24/12 20060101ALI20131030BHEP
EP1532080 A1	20131204	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 28/02 20060101AFI20131030BHEP
EP1532080 A1	20131204	LSRE	RIC1	CLASSIFICATION (CORRECTION)	CLASSIFICATIONSCHEME : IPC CLASSIFICATIONSYMBOL : C04B 103/12 20060101ALN20131030BHEP
EP1532080 A1	20131211	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20131114
EP1532080 A1	20140207	LSWD	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : WD REF DOCUMENT NUMBER : 1075447 COUNTRY OF REF DOCUMENT : HK
EP1532080 A1	20140305	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP1532080 A1	20140410	LSPB	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R096 REF DOCUMENT NUMBER : 60345811 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20140410
EP1532080 A1	20141208	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 60345811 COUNTRY OF REF DOCUMENT : DE
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EP1532080 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160727 YEAR OF FEE PAYMENT : 14
EP1532080 A1	20161130	LSFE	+PGFP	POSTGRANT:	COUNTRY OF REF DOCUMENT :

					ANNUAL FEES PAID TO NATIONAL OFFICE	FR PAYMENT DATE : 20160726 YEAR OF FEE PAYMENT : 14
EP1532080 B1	20140305	LSGT	+	granted / extensions (spc, cpc, pte)		
HK1075447 A3	20051216	LSPB	+	published / reissued		
JP2005537208 T2	20051208	LSPB	+	published / reissued		
JP2005537208 T2	20050929	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20050928	
JP2005537208 T2	20060603	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060602	
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JP2005537208 T2	20090905	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090904	
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JP2005537208 T2	20100402	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100401	
JP2005537208 T2	20100402	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100401	
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JP2005537208 T2	20100512	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20100419	
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JP2005537208 T2	20100811	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20100810	
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US2004040474 AA	20040304	LSPB	+	published / reissued		
US6869474 BB	20050322	LSGT	+	granted / extensions (spc, cpc, pte)		
US6869474 BB	20030416	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITED STATES GYPSUM COMPANY, ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:PEREZ-PENA, MARIANELA; DUBEY, ASHISH; REEL/FRAME:013981/0946; SIGNING DATES FROM 20030414 TO 20030415	
US6869474 BB	20050705	LSRE	CC	CERTIFICATE OF CORRECTION		
US6869474 BB	20080922	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4	

US6869474 BB	20120924	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6869474 BB	20160922	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
WO04020359 A1	20040311	LSPB	+	published / reissued	
WO04020359 A1	20040426	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003791571 COUNTRY OF REF DOCUMENT : EP
WO04020359 A1	20040428	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004532594 COUNTRY OF REF DOCUMENT : JP
WO04020359 A1	20050525	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2003791571 COUNTRY OF REF DOCUMENT : EP

Title: ANTIBACTERIAL AGENT FOR CONCRETE, CONCRETE COMPOSITIONS AND CONCRETE PRODUCTS

Abstract: Source: US2004103823A The invention provides an antibacterial agent for concrete comprising a silver compound, a copper compound and an ion-retaining compound; a concrete composition comprising the antibacterial agent; and a concrete product produced from the concrete composition. The concrete composition containing the antibacterial agent and the concrete product produced using the concrete composition show excellent antibacterial effect against causative bacteria of the corrosion of concrete such as sulfur reducing bacteria, sulfur oxidizing bacteria and carboxylic acid-producing bacteria, in particular, in sewage treatment plants.

Classifications:

International (IPC 8-9): A01N25/00 A01N25/08 A01N59/16 A01N59/20 A01P3/00 A61L2/16 C04B103/69 C04B22/00 C04B22/06 C04B22/10 C04B22/16 C04B28/02 C04B40/00 (Advanced/Invention);

A01N59/20 C04B103/69 C04B22/00 C04B22/06 C04B22/10 C04B22/16 (Advanced/Non-invention);

A01N25/08 A01N59/16 A61L2/16 C04B22/00 C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): A01N25/08 A01N59/16 A01N59/20 A61L2/16 C04B103/69 C04B22/00 C04B22/08 C04B22/10 C04B22/16 C04B28/02

CPC: A01N59/16 A01N59/20 C04B22/00 C04B40/0039 C04B2103/67

European: A01N59/16 A01N59/20 C04B22/00 C04B40/00D4 M04B103/67

US: 106/15.05 106/15.050S 106/18.31 106/18.310S 106/18.32 106/18.320S 106/724 106/724S 106/727 106/727S 106/733 106/802 106/802S 106/808 106/808S 106/819 106/819S 106/823 106/823S 424/618 424/618S

Family:

Publication number	Publication date	Application number	Application date
CN1307120 C	20070328	CN20021051583	20021213
CN1504434 A	20040616	CN20021051583	20021213
JP2004175772 A2	20040624	JP20020347356	20021129
JP4387097 B2	20091216	JP20020347356	20021129
KR100821445 B1	20080410	KR20060005565	20060118
KR20040047502 A	20040605	KR20020081240	20021218
KR20060014449 A	20060215	KR20060005565	20060118
US2004103823 AA	20040603	US20030338662	20030109
US6752867 BA	20040622	US20030338662	20030109

Priority:

JP20020347356 20021129

Probable Assignee: SINANEN ZEOMIC CO LTD

Assignee(s): (std): SINANEN ZEOMIC CO LTD

Assignee(s): SINANEN ZEOMIC CO

Inventor(s): (std): JAVIER KAMIIKE YUJI KURIHARA Y ; JAVIER TAKAHASHI ; KAMIIKE YUJI ; KURIHARA YASUO ; TAKAHASHI JAVIER ; YASUO KURIHARA ; YUJI KAMIIKE

Inventor(s): KAMIIKE YUJI KURIHARA YASUO TAKAHASHI JAVIER

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN1307120 C	20070328	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1307120 C	20040616	LSPB	+C06	PUBLICATION	
CN1307120 C	20070328	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1504434 A	20040616	LSPB	+	published / reissued	
JP2004175772 A2	20040624	LSPB	+	published / reissued	
JP4387097 B2	20091216	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4387097 B2	20050706	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20050705
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JP4387097 B2	20090529	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20090528
JP4387097 B2	20090831	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP4387097 B2	20090904	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20090903

JP4387097 B2	20090910	LSGT	+A01	OR TO GRANT A REGISTRATION (UTILITY MODEL) WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4387097 B2	20091008	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20090930
JP4387097 B2	20091009	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4387097 B2	20091015	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20121009 YEAR OF FEE PAYMENT : 3
JP4387097 B2	20120821	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20131009 YEAR OF FEE PAYMENT : 4
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KR100821445 B1	20080410	LSGT	+	granted / extensions (spc, cpc, pte)	
KR100821445 B1	20060407	LSES	A201	REQUEST FOR EXAMINATION	
KR100821445 B1	20061215	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR100821445 B1	20070315	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR100821445 B1	20080104	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR100821445 B1	20080307	LSGT	+GRNO	DECISION TO GRANT (AFTER OPPOSITION)	
KR100821445 B1	20080403	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR100821445 B1	20130215	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20130215 YEAR OF FEE PAYMENT : 6
KR100821445 B1	20140307	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20140307 YEAR OF FEE PAYMENT : 7
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KR100821445 B1	20170306	LSFE	FPAY	ANNUAL FEE PAYMENT	PAYMENT DATE : 20170306 YEAR OF FEE PAYMENT : 10
KR20040047502 A	20040605	LSPB	+	published / reissued	
KR20040047502 A	20021218	LSES	A201	REQUEST FOR EXAMINATION	
KR20040047502 A	20041130	LSES	-E902	NOTIFICATION OF REASON FOR REFUSAL	
KR20040047502 A	20051118	LSRV	-E601	DECISION TO REFUSE APPLICATION	
KR20040047502 A	20060118	LSRE	AMND	AMENDMENT	
KR20040047502 A	20060407	LSWD	-WITB	WRITTEN WITHDRAWAL OF APPLICATION	
KR20060014449 A	20060215	LSPB	+	published / reissued	
US2004103823 AA	20040603	LSPB	+	published / reissued	

US6752867 BA	20040622	LSGT	+	granted / extensions (spc, cpc, pte)	
US6752867 BA	20030109	LSAS	AS	ASSIGNMENT	OWNER NAME : SINANEN ZEOMIC CO., LTD., JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KURIHARA, YASUO; TAKAHASHI, JAVIER; KAMIIKE, YUJI; REEL/FRAME:013664/0680 EFFECTIVE DATE : 20030106
US6752867 BA	20071017	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6752867 BA	20111025	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6752867 BA	20151209	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

Title: LIQUID SETTING ACCELERATOR FOR A COMPOSITION COMPRISING PORTLAND CEMENT

Abstract: Source: US2006070553A The invention relates to a setting accelerator for a composition comprising Portland cement, in the form of a slurry comprising at least one calcium aluminate, 0.5 4 percent, preferably 0.6 2.3 percent of an aluminous cement setting inhibitor by weight in relation to the overall weight of the calcium aluminate, and an anti-sedimentation agent.

Classifications:

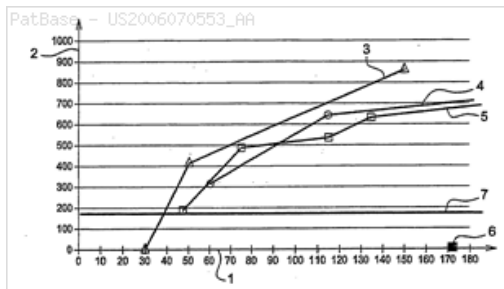
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International (IPC 1-7): C04B103/12 C04B22/06 C04B28/04 C04B7/42

CPC: C04B40/0039 C04B2103/12

European: C04B40/00D4 M04B103/12

US: 106/692 106/693 106/724 106/730 106/819 106/823



Family:

Publication number	Publication date	Application number	Application date
AT359242 E	20070515	AT20030810020T	20031224
AU2003302203 AA	20040729	AU20030302203	20031224
AU2003302203 AH	20040729	AU20030302203	20031224
CA2511899 AA	20050623	CA20032511899	20031224
CN100337962 C	20070919	CN200380109310	20031224
CN1745046 A	20060308	CN200380109310	20031224
DE60313217 D1	20070524	DE20036013217	20031224
DE60313217 T2	20071227	DE20036013217T	20031224
DK1578703 T3	20070730	DK20030810020T	20031224
EP1578703 A2	20050928	EP20030810020	20031224
EP1578703 B1	20070411	EP20030810020	20031224
ES2285261 T3	20071116	ES20030810020T	20031224
FR2849440 A1	20040702	FR20020016779	20021227
FR2849440 B1	20050715	FR20020016779	20021227
JP2006512272 T2	20060413	JP20040564335T	20031224
PT1578703 T	20070629	PT20030810020T	20031224
US2006070553 AA	20060406	US20050540976	20050627
US7326290 BB	20080205	US20050540976	20050627
WO04060828 A2	20040722	WO2003FR50212	20031224
WO04060828 A3	20040819	WO2003FR50212	20031224
ZA200505150 A	20061227	ZA20050005150	20050624

Priority:

FR20020016779 20021227 FR20020216779 20021227 WO2003FR50212 20031224

Probable Assignee: KERNEOS

Assignee(s): (std): CHARPENTIER ERIC ; FRIER ERIC ; GUINOT DOMINIQUE ; KERNEOS ; LAFARGE ALUMINATES

Assignee(s): MLA

Inventor(s): (std): CHARPENTIER ERIC ; DOMINIQUE GUINOT ; DORMINIQUE GUINOT ; ERIC CHARPENTIER ; ERIC FRIER ; ERIC GUINOT DOMINIQUE CHARPENT ; FRIER ERIC ; GUINOT DOMINIQUE ; GUINOT DOMINIQUE CHARPENTIER ERIC FRIER ERIC

Inventor(s): GUINOT DORMINIQUE

Agent(s): GOWLING LAFLEUR HENDERSON LLP; YOUNG AND THOMPSON

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SC SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT359242 E	20070515	LSGT	+	granted / extensions (spc, cpc, pte)	
AT359242 E	20070915	LSPB	+UEP	PUBLICATION OF TRANSLATION OF EUROPEAN PATENT SPECIFICATION	REF DOCUMENT NUMBER : 1578703 COUNTRY OF REF DOCUMENT : EP
AU2003302203 AA	20040729	LSPB	+	published / reissued	
AU2003302203 AA	20050922	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING	

					NATIONAL PHASE	
CA2511899 AA	20050623	LSPB	+	published / reissued		
CA2511899 AA	20050623	LSNP	+AFNE	NATIONAL PHASE ENTRY		
CA2511899 AA	20091224	LSLE	-FZDE	DEAD		
CN100337962 C	20070919	LSGT	+	granted / extensions (spc, cpc, pte)		
CN1745046 A	20060308	LSPB	+	published / reissued		
CN1745046 A	20060308	LSPB	+C06	PUBLICATION		
CN1745046 A	20070919	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL		
CN1745046 A	20170215	LSRV	-EXPY	TERMINATION OF PATENT RIGHT OR UTILITY MODEL		
DE60313217 D1	20080430	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION		
DE60313217 T2	20071227	LSGT	+	granted / extensions (spc, cpc, pte)		
DK1578703 T3	20070730	LSGT	+	granted / extensions (spc, cpc, pte)		
EP1578703 A2	20050928	LSPB	+	published / reissued		
EP1578703 A2	20050928	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20050727	
EP1578703 A2	20070124	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : MLA	
EP1578703 A2	20070131	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	PARTYTYPE : OWNER OWNER : KERNEOS	
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EP1578703 A2	20070516	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D TEXT : LANGUAGE OF EP DOCUMENT: FRENCH	
EP1578703 A2	20070621	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20070401649 COUNTRY OF REF DOCUMENT : GR	
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EP1578703 A2	20080131	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-	

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EP1578703 A2	20120711	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : NL REF LEGAL EVENT CODE : V1 EFFECTIVE DATE : 20120701

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EP1578703 A2	20120926	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
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EP1578703 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20141203 YEAR OF FEE PAYMENT : 12
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EP1578703 A2	20150130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : LU PAYMENT DATE : 20141204 YEAR OF FEE PAYMENT : 12
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EP1578703 A2	20150331	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20141218 YEAR OF FEE PAYMENT : 12

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EP1578703 A2	20160729	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1578703 A2	20160802	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : SE REF LEGAL EVENT CODE : EUG
EP1578703 A2	20160815	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : MM01 REF DOCUMENT NUMBER : 359242 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20151224
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EP1578703 A2	20160831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : SE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20151225
EP1578703 A2	20160930	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST EFFECTIVE DATE : 20160831
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EP1578703 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20151231
EP1578703 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20160701
EP1578703 A2	20161031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE	COUNTRY OF REF DOCUMENT : GB NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE

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EP1578703 A2	20161130	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : AT NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20151224
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EP1578703 A2	20170228	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : ES NOTIFICATIONNOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20151225
EP1578703 B1	20070411	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2285261 T3	20071116	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2849440 A1	20040702	LSPB	+	published / reissued	
FR2849440 A1	20070309	LSAS	CD	CHANGE OF NAME OR COMPANY NAME	
FR2849440 A1	20091002	LSLE	-ST	NOTIFICATION OF LAPSE	EFFECTIVE DATE : 20090831
FR2849440 B1	20050715	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2006512272 T2	20060413	LSPB	+	published / reissued	
JP2006512272 T2	20060816	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060815
JP2006512272 T2	20090728	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090728
JP2006512272 T2	20100129	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100128
JP2006512272 T2	20100129	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20100128
JP2006512272 T2	20100420	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100420
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JP2006512272 T2	20110621	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110621
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EFFECTIVE DATE : 20120124					
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PT1578703 T	20070629	LSGT	+	granted / extensions (spc, cpc, pte)	
US2006070553 AA	20060406	LSPB	+	published / reissued	
US7326290 BB	20080205	LSGT	+	granted / extensions (spc, cpc, pte)	
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US7326290 BB	20070104	LSAS	AS	ASSIGNMENT	OWNER NAME : KERNEOS, FRANCE DESCRIPTION : CHANGE OF NAME; ASSIGNOR:MLA; REEL/FRAME:018711/0994 EFFECTIVE DATE : 20060627
US7326290 BB	20070921	LSAS	AS	ASSIGNMENT	OWNER NAME : LAFARGE ALUMINATES, FRANCE DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:GUINOT, DOMINIQUE; CHARPENTIER, ERIC; FRIER, ERIC; REEL/FRAME:019866/0478; SIGNING DATES FROM 20050613 TO 20050614
US7326290 BB	20080107	LSAS	AS	ASSIGNMENT	OWNER NAME : KERNEOS, FRANCE DESCRIPTION : CHANGE OF ADDRESS; ASSIGNOR:KERNEOS; REEL/FRAME:020325/0337 EFFECTIVE DATE : 20070904
US7326290 BB	20110707	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7326290 BB	20150703	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
WO04060828 A2	20040722	LSPB	+	published / reissued	
WO04060828 A3	20050623	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2511899 COUNTRY OF REF DOCUMENT : CA
WO04060828 A3	20050624	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200505150 COUNTRY OF REF DOCUMENT : ZA
WO04060828 A3	20050624	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005/05150 COUNTRY OF REF DOCUMENT : ZA
WO04060828 A3	20050627	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2006070553 COUNTRY OF REF DOCUMENT : US KIND CODE OF REF DOCUMENT : A1
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WO04060828 A3	20050627	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10540976 COUNTRY OF REF DOCUMENT : US
WO04060828 A3	20050628	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2003810020 COUNTRY OF REF DOCUMENT : EP
WO04060828 A3	20050727	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 20038A93107 COUNTRY OF REF DOCUMENT : CN
WO04060828 A3	20050928	LSPB	+WWP	WIPO	REF DOCUMENT NUMBER :

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ZA200505150 A	20061227	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: SETTING ACCELERATOR FOR SPRAYED CONCRETE

Abstract: Source: US2008090016A An accelerating admixture for concrete, containing a liquid mixture being an aqueous solution or an aqueous dispersion, wherein a) the liquid mixture contains 13 to 43 weight percent dissolved aluminium sulfate, b) the liquid mixture contains less than 1 weight percent dissolved carboxylic acid, c) the liquid mixture contains at least 31 weight percent water, d) the molar ratio of dissolved aluminium to dissolved sulfate in the liquid mixture is from 0.5 to 10.0.

Classifications:

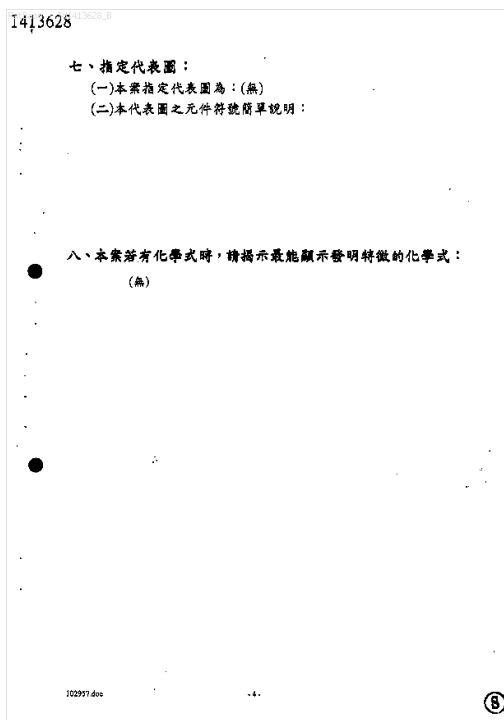
International (IPC 8-9): C04B22/06 C04B22/14 C04B24/04 C04B28/02 C04B40/00 E21D11/10 (Advanced/Invention); C04B22/00 C04B24/00 C04B28/00 C04B40/00 E21D11/10 (Core/Invention)

International (IPC 1-7): C04B22/14

CPC: C04B40/0039 C04B2103/12 C04B2111/00155

European: C04B40/00D4 M04B103/12 M04B111/00M16B

US: 106/727 106/815 106/815S 106/819 106/823 427/427 427/427P



Family:

Publication number	Publication date	Application number	Application date
AU2005266646 AA	20060202	AU20050266646	20050616
AU2012200150 AA	20120202	AU20120200150	20120111
AU2012200150 BB	20130110	AU20120200150	20120111
CA2575146 AA	20070125	CA20052575146	20050616
CA2575146 C	20121002	CA20052575146	20050616
CL2005001876 A1	20060609	CL20050001876	20050726
CL48874 B	20121119	CL20050001876	20050726
CN1989082 A	20070627	CN200580025329	20050616
CN1989082 B	20101103	CN200580025329	20050616
EP1805115 A1	20070711	EP20050750547	20050616
GB200416791 A0	20040901	GB20040016791	20040728
JP2008508168 T2	20080321	JP20070522931T	20050616
JP4928450 B2	20120509	JP20070522931	20050616
NO20070623 A	20070228	NO20070000623	20070202
TW200616921 A	20060601	TW20050123067	20050707
TWI413628 B	20131101	TW20050123067	20050707
US2008090016 AA	20080417	US20050658549	20050616
US8118930 BB	20120221	US20050658549	20050616
WO06010407 A1	20060202	WO2005EP06442	20050616

Priority:

AU20050266646 20050616 AU20120200150 20120111 GB20040016791 20040728
WO2005EP06442 20050616

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): ANGELSKAR TERJE ; CONSTR RES AND TECH GMBH ; DIE CONSTRUCTION RES AND TECHNOL ; RES AND TECHNOLOGY GMBH CONST

Assignee(s): DIE CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Inventor(s): (std): ANGELSKAAR TERJE ; ANGELSKAR TERJE ; TERJE ANGELSKAR

Agent(s): CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; CLARKE; CURATOLO SIDOTI CO LPA; JOSEPH G; SALVATORE A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AU2005266646 AA	20060202	LSPB	+	published / reissued	
AU2005266646 AA	20120209	LSLE	-MK5	APPLICATION LAPSED SECTION 142(2)(E) - PATENT REQUEST AND COMPL. SPECIFICATION NOT ACCEPTED	
AU2012200150 AA	20120202	LSPB	+	published / reissued	
AU2012200150 AA	20130509	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2012200150 BB	20130110	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2575146 AA	20070125	LSPB	+	published / reissued	
CA2575146 AA	20070125	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2575146 AA	20100513	LSSES	+EEER	EXAMINATION REQUEST	
CA2575146 AA	20100610	LSSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20100513
CA2575146 C	20121002	LSGT	+	granted / extensions (spc, cpc, pte)	
CL2005001876 A1	20060609	LSPB	+	published / reissued	
CL48874 B	20121119	LSGT	+	granted / extensions (spc, cpc, pte)	
CN1989082 A	20070627	LSPB	+	published / reissued	
CN1989082 A	20070627	LSPB	+C06	PUBLICATION	
CN1989082 A	20101103	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1989082 B	20101103	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1805115 A1	20070711	LSPB	+	published / reissued	
EP1805115 A1	20070711	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20070228
EP1805115 A1	20071024	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH
EP1805115 A1	20071107	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20071005
GB200416791 A0	20061011	LSWD	-AT	APPLICATIONS TERMINATED BEFORE PUBLICATION UNDER SECTION 16(1)	
JP2008508168 T2	20080321	LSPB	+	published / reissued	
JP2008508168 T2	20110124	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20110121
JP2008508168 T2	20110722	LSRE	A524	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A524 EFFECTIVE DATE : 20110721
JP2008508168 T2	20110818	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20110817
JP2008508168 T2	20111217	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20111216
JP2008508168 T2	20111227	LSAL	A911	TRANSFER OF RECONSIDERATION BY EXAMINER BEFORE APPEAL (ZENCHI)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A911 EFFECTIVE DATE : 20111226
JP2008508168 T2	20120112	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2008508168 T2	20120123	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20120120

JP2008508168 T2	20120126	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP2008508168 T2	20120216	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20120210
JP2008508168 T2	20120217	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20150217 YEAR OF FEE PAYMENT : 3
JP2008508168 T2	20120217	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4928450 B2	20120509	LSGT	+	granted / extensions (spc, cpc, pte)	
JP4928450 B2	20080329	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20080328
JP4928450 B2	20110722	LSRE	A524	WRITTEN SUBMISSION OF COPY OF AMENDMENT UNDER SECTION 19 (PCT)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A524 EFFECTIVE DATE : 20110721
JP4928450 B2	20110818	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20110817
JP4928450 B2	20150217	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
NO20070623 A	20070228	LSPB	+	published / reissued	
TW200616921 A	20060601	LSPB	+	published / reissued	
TWI413628 B	20131101	LSGT	+	granted / extensions (spc, cpc, pte)	
TWI413628 B	20160801	LSLE	-MM4A	ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES	
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US2008090016 AA	20070330	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ANGELSKAR, TERJE; REEL/FRAME:019092/0847 EFFECTIVE DATE : 20070319
US8118930 BB	20120221	LSGT	+	granted / extensions (spc, cpc, pte)	
US8118930 BB	20070330	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:ANGELSKAR, TERJE; REEL/FRAME:019092/0847 EFFECTIVE DATE : 20070319
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US8118930 BB	20150819	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
WO06010407 A1	20060202	LSPB	+	published / reissued	
WO06010407 A1	20061208	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005750547 COUNTRY OF REF DOCUMENT : EP
WO06010407 A1	20061213	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2005266646 COUNTRY OF REF DOCUMENT : AU

WO06010407 A1	20070111	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2005266646 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20050616 KIND CODE OF REF DOCUMENT : A
WO06010407 A1	20070111	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2005266646 COUNTRY OF REF DOCUMENT : AU
WO06010407 A1	20070125	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2575146 COUNTRY OF REF DOCUMENT : CA
WO06010407 A1	20070126	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200580025329.2 COUNTRY OF REF DOCUMENT : CN
WO06010407 A1	20070129	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007522931 COUNTRY OF REF DOCUMENT : JP
WO06010407 A1	20070130	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06010407 A1	20070502	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 11658549 COUNTRY OF REF DOCUMENT : US
WO06010407 A1	20070711	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2005750547 COUNTRY OF REF DOCUMENT : EP
WO06010407 A1	20080417	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 11658549 COUNTRY OF REF DOCUMENT : US

Title: CEMENT COMPOSITIONS WITH IMPROVED FLUID LOSS CHARACTERISTICS AND METHODS OF CEMENTING IN SURFACE AND SUBTERRANEAN APPLICATIONS

Abstract: Source: US2004262000A The present invention provides cement compositions comprising an improved fluid loss control additive, and methods for cementing using such cement compositions. Exemplary embodiments of the cement compositions comprise a hydraulic cement, water, and a fluid loss control additive comprising an acrylamide copolymer derivative, a dispersant, and a hydratable polymer. Optionally, other additives suitable for inclusion in cement compositions may be added.

Classifications:

International (IPC 8-9): C04B22/00 C04B22/12 C04B24/12 C04B24/16 C04B24/26 C04B24/38 C04B26/28 C04B28/02 C04B40/00 C09K8/487 C09K8/588 E21B33/13 E21B33/138 (Advanced/Invention); C04B22/00 C04B24/00 C04B26/00 C04B28/00 C04B40/00 C09K8/42 C09K8/58 E21B33/13 E21B33/138 (Core/Invention)
International (IPC 1-7): C04B22/04 C04B22/12 C04B24/10 C04B24/12 C04B24/16 C04B24/26 C04B24/38 C04B26/28 C04B28/02 C04B28/04 C04B40/00 C04B7/00 C08J3/00 C09K8/487 E21B33/13 E21B33/138 E21B43/00
CPC: Y02W30/92 Y02W30/94 C04B28/04 C04B24/163 C04B24/2652 C04B2103/0014 C04B2103/0028 C04B2103/22 C04B2103/46 C09K8/467 C04B40/0039 C04B28/02 C04B2111/00146 C09K8/487
European: C04B24/16P2 C04B24/26N C04B28/02 C04B28/04 C04B40/00D4 C09K8/467 C09K8/487 M04B103/00C10F M04B103/00H2 M04B103/22 M04B103/46 M04B111/00M16
US: 106/724 106/725 106/725S 106/726 106/727 106/727S 106/73 106/730 106/730S 106/733 106/805 106/805S 106/808 106/808S 106/809 106/809S 106/810 106/810S 106/819 106/819S 106/822 106/822S 106/823 166/282 166/293 166/294 166/295 166/295S 507/225 507/225S 507/226 507/226P 507/226S 507/269 507/277 524/413 524/413S 524/450 524/450S 524/493 524/493S 524/555 524/555S

Family:

Publication number	Publication date	Application number	Application date
CA2527860 AA	20051130	CA20042527860	20040415
US2004262000 AA	20041230	US20030608748	20030627
US2004262001 AA	20041230	US20040891384	20040714
US2005034864 AA	20050217	US20040945487	20040920
US2005121194 AA	20050609	US20050035520	20050114
US2005124503 AA	20050609	US20050036145	20050114
US2005178295 AA	20050818	US20050100757	20050407
US7021380 BB	20060404	US20040891384	20040714
US7073585 BB	20060711	US20030608748	20030627
US7285165 BB	20071023	US20050100757	20050407
US7384893 BB	20080610	US20050035520	20050114
US7384894 BB	20080610	US20050036145	20050114
WO05003053 A1	20050113	WO2004GB01648	20040415
WO06005904 A1	20060119	WO2005GB02626	20050704
WO06032841 A1	20060330	WO2005GB03457	20050908

Priority:

US20030608748 20030627 US20040891384 20040714 US20040945487 20040920
US20050035520 20050114 US20050036145 20050114 US20050100757 20050407
WO2004GB01648 20040415

Probable Assignee: HALLIBURTON ENERGY SERV INC

Assignee(s): (std): CAVENY WILLIAM J ; HALLIBURTON ENERGY SERV INC ; HALLIBURTON ENERGY SERVICES INC ; KOCH RONNEY R ; MORGAN RICKEY L ; WAIN CHRISTOPHER PAUL

Inventor(s): (std): CAVENY WILLIAM J ; KOCH RONNEY R ; MORGAN RICKEY L

Inventor(s): CAVENY WILLIAM ; MORGAN RICKEY ; KOCH RONNEY

Agent(s): OGILVY RENAULT LLP SENCRL SRL; CRAIG W RODDY HALLIBURTON ENERGY SERVICES; CRAIG W; BAKER BOTTS LLP; RODDY CRAIG W

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2527860 AA	20051130	LSPB	+	published / reissued	
CA2527860 AA	20051130	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2527860 AA	20051130	LSSES	+EEER	EXAMINATION REQUEST	
CA2527860 AA	20080415	LSLE	-FZDE	DEAD	
US2004262000 AA	20041230	LSPB	+	published / reissued	
US2004262001 AA	20041230	LSPB	+	published / reissued	
US2005034864 AA	20050217	LSPB	+	published / reissued	
US2005034864 AA	20040920	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF

					ASSIGNORS INTEREST; ASSIGNORS:CAVENY, WILLIAM J.; MORGAN, RICKEY L.; KOCH, RONNEY R.; REEL/FRAME:015821/0294; SIGNING DATES FROM 19940917 TO 20040916	
US2005121194 AA	20050609	LSPB	+	published / reissued		
US2005124503 AA	20050609	LSPB	+	published / reissued		
US2005178295 AA	20050818	LSPB	+	published / reissued		
US7021380 BB	20060404	LSGT	+	granted / extensions (spc, cpc, pte)		
US7021380 BB	20040714	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:CAVENY, WILLIAM J.; MORGAN, RICKEY L.; KOCH, RONNEY R.; REEL/FRAME:015577/0511; SIGNING DATES FROM 20040707 TO 20040713	
US7021380 BB	20090922	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4	
US7021380 BB	20130925	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8	
US7073585 BB	20060711	LSGT	+	granted / extensions (spc, cpc, pte)		
US7073585 BB	20030627	LSAS	AS	ASSIGNMENT	OWNER NAME : HALLIBURTON ENERGY SERVICES, INC., TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MORGAN, RICKEY L.; CAVENY, WILLIAM J.; KOCH, RONNEY R.; REEL/FRAME:014247/0483 EFFECTIVE DATE : 20030626	
US7073585 BB	20091222	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4	
US7073585 BB	20131230	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8	
US7285165 BB	20071023	LSGT	+	granted / extensions (spc, cpc, pte)		
US7285165 BB	20110323	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4	
US7285165 BB	20151023	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES		
US7285165 BB	20151215	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20151023	
US7384893 BB	20080610	LSGT	+	granted / extensions (spc, cpc, pte)		
US7384893 BB	20110923	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4	
US7384893 BB	20151124	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8	
US7384894 BB	20080610	LSGT	+	granted / extensions (spc, cpc, pte)		
US7384894 BB	20110923	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4	
US7384894 BB	20151124	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8	
WO05003053 A1	20050113	LSPB	+	published / reissued		
WO05003053 A1	20051130	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2527860 COUNTRY OF REF DOCUMENT : CA	
WO06005904 A1	20060119	LSPB	+	published / reissued		

WO06005904 A1	20070116	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO06005904 A1	20070116	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE
WO06032841 A1	20060330	LSPB	+	published / reissued	
WO06032841 A1	20070321	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: LIQUID ACCELERATOR

Abstract: Source: US2007044686A To provide a liquid accelerator which excels in accelerating effect and which also excels in storage stability at low temperature and inhibitory effect of alkali-aggregation reaction. A liquid accelerator composed of a fluoride-containing aqueous aluminum salt which is obtained through the reaction of aluminum sulfate and hydrofluoric acid, aluminum hydroxide, and one or more kinds of lithium salts selected from the group consisting of lithium hydroxides, lithium carbonates, and lithium sulfates.

Classifications:

International (IPC 8-9): B05D7/00 B28C5/06 B28C7/00 C04B14/00 C04B22/06 C04B22/10 C04B22/12 C04B22/14 C04B24/00 C04B24/04 C04B24/12 C04B24/26 C04B28/26 C04B40/00 C04B7/00 E21D11/10 (Advanced/Invention);

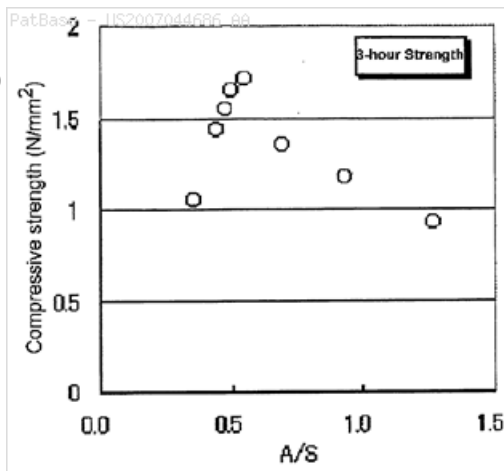
C04B103/12 (Advanced/Non-invention); B05D7/00 B28C5/00 B28C7/00 C04B14/00 C04B22/00 C04B24/00 C04B28/00 C04B40/00 C04B7/00 E21D11/10 (Core/Invention)

International (IPC 1-7): B28C5/06 B28C7/00 C04B103/12 C04B22/06 C04B22/10 C04B22/14 C04B24/04 C04B24/12 C04B24/26 C04B40/00 E21D11/10

CPC: C04B40/0039 C04B2103/12 C04B2111/00155

European: C04B40/00D4 M04B103/12 M04B111/00M16B

US: 106/727 106/728 106/728S 106/734 106/734S 106/815 106/815S 106/819 106/819S 106/823 106/823S 427/421.1 427/421.100S

**Family:**

Publication number	Publication date	Application number	Application date
AT545621 E	20120315	AT20040764239T	20040818
DE602004036527 D1	20120412	DE200460036527T	20040818
EP1663909 A1	20060607	EP20040764239	20040818
EP1663909 B1	20120215	EP20040764239	20040818
ES2378992 T3	20120419	ES20040764239T	20040818
JP2005089276 A2	20050407	JP20030328772	20030919
JP4452473 B2	20100421	JP20030328772	20030919
NO20061591 A	20060619	NO20060001591	20060407
PL1663909 T3	20120731	PL20040764239T	20040818
PT1663909 T	20120308	PT20040764239T	20040818
SI1663909 T1	20121231	SI20040031869T	20040818
US2007044686 AA	20070301	US20040571728	20040818
US7662230 BB	20100216	US20040571728	20040818
WO05028398 A1	20050331	WO2004EP09253	20040818

Priority:

EP20040764239 20040818 JP20030328772 20030919 WO2004EP09253 20040818

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): ANGELSKAAR TERJE ; ANGELSKAR TERJE ; CONSTR RES AND TECH GMBH ; RES AND TECHNOLOGY GMBH CONST ; IWATA RAITA ; NMB CO LTD ; RES AND TECHNOLOGY GMBH PATENTE MARKEN CONST

Assignee(s): CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH PATENTE MARKEN ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Inventor(s): (std): ANGELSKAAR TERJE ; ANGELSKAR TERJE ; IWATA RAITA

Inventor(s): RAITA IWATA ; TERJE ANGELSKAR

Agent(s): CURATOLO SIDOTI CO LPA; JOSEPH G; SALVATORE A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT545621 E	20120315	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1663909 A1	20060607	LSPB	+	published / reissued	
EP1663909 A1	20060607	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20060419
EP1663909 A1	20070905	LSSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20070802
EP1663909 A1	20120215	LSNP	REG	REFERENCE TO	REF COUNTRY CODE : CH

				A NATIONAL CODE	REF LEGAL EVENT CODE : EP
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EP1663909 A1	20120314	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
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EP1663909 A1	20120618	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : EP REF DOCUMENT NUMBER : 20120400816 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20120518
EP1663909 A1	20120731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : NL NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120215
EP1663909 A1	20120831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120215
EP1663909 A1	20120928	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CY NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120215
EP1663909 A1	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : RO NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120215
EP1663909 A1	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : EE NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120215
EP1663909 A1	20121031	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120215

EP1663909 A1	20130123	LSGT	+26N	NO OPPOSITION FILED	EFFECTIVE DATE : 20121116
EP1663909 A1	20130314	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R097 REF DOCUMENT NUMBER : 602004036527 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20121116
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EP1663909 A1	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120515
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EP1663909 A1	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HU NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20040818
EP1663909 A1	20141031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FI PAYMENT DATE : 20140822 YEAR OF FEE PAYMENT : 11
EP1663909 A1	20141031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GR PAYMENT DATE : 20140828 YEAR OF FEE PAYMENT : 11
EP1663909 A1	20141031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CH PAYMENT DATE : 20140826 YEAR OF FEE PAYMENT : 11
EP1663909 A1	20141031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IE PAYMENT DATE : 20140825 YEAR OF FEE PAYMENT : 11
EP1663909 A1	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20150923 YEAR OF FEE PAYMENT : 12
EP1663909 A1	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PT PAYMENT DATE : 20150730 YEAR OF FEE PAYMENT : 12
EP1663909 A1	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : CZ PAYMENT DATE : 20150817 YEAR OF FEE PAYMENT : 12
EP1663909 A1	20151130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SI PAYMENT DATE : 20150724 YEAR OF FEE PAYMENT : 12
EP1663909 A1	20151130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20150723 YEAR OF FEE PAYMENT : 12
EP1663909 A1	20151130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20150717

EP1663909 A1	20160129	LSFE	+PGFP	PAID TO NATIONAL OFFICE POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	YEAR OF FEE PAYMENT : 12 COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20151029 YEAR OF FEE PAYMENT : 12
EP1663909 A1	20160331	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP1663909 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150831
EP1663909 A1	20160429	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20150831
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EP1663909 A1	20160617	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GR REF LEGAL EVENT CODE : ML REF DOCUMENT NUMBER : 20120400816 COUNTRY OF REF DOCUMENT : GR EFFECTIVE DATE : 20160303
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EP1663909 A1	20160829	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 13
EP1663909 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20160831 YEAR OF FEE PAYMENT : 13
EP1663909 A1	20161031	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20160822 YEAR OF FEE PAYMENT : 13
EP1663909 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : SE PAYMENT DATE : 20160824 YEAR OF FEE PAYMENT : 13
EP1663909 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : AT PAYMENT DATE : 20160826 YEAR OF FEE PAYMENT : 13
EP1663909 A1	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES	COUNTRY OF REF DOCUMENT : SK PAYMENT DATE : 20160816

					PAID TO NATIONAL OFFICE	YEAR OF FEE PAYMENT : 13
EP1663909 A1	20161130	LSFE	+PGFP		POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20160829 YEAR OF FEE PAYMENT : 13
EP1663909 A1	20161230	LSFE	+PGFP		POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20160811 YEAR OF FEE PAYMENT : 13
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ES2378992 T3	20120419	LSGT	+		granted / extensions (spc, cpc, pte)	
JP2005089276 A2	20050407	LSPB	+		published / reissued	
JP4452473 B2	20100421	LSGT	+		granted / extensions (spc, cpc, pte)	
JP4452473 B2	20060916	LSRE	A521	WRITTEN AMENDMENT		DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20060915
JP4452473 B2	20060916	LSSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION		DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20060915
JP4452473 B2	20090818	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL		DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20090818
JP4452473 B2	20091119	LSRE	A521	WRITTEN AMENDMENT		DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20091118
JP4452473 B2	20091207	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN		
JP4452473 B2	20100112	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)		DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20100112
JP4452473 B2	20100114	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)		DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01
JP4452473 B2	20100204	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)		DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20100201
JP4452473 B2	20100205	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL		DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP4452473 B2	20120810	LSAS	S111	REQUEST FOR CHANGE OF OWNERSHIP OR PART OF OWNERSHIP		DESCRIPTION : JAPANESE INTERMEDIATE CODE: R313115
JP4452473 B2	20120820	LSAS	R350	WRITTEN NOTIFICATION OF		DESCRIPTION : JAPANESE INTERMEDIATE CODE: R350

JP4452473 B2	20130131	LSFE	+FPAY	REGISTRATION OF TRANSFER RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20130205 YEAR OF FEE PAYMENT : 3
JP4452473 B2	20130205	LSFE	+FPAY	RENEWAL FEE PAYMENT (EVENT DATE IS RENEWAL DATE OF DATABASE)	DESCRIPTION : PAYMENT UNTIL: 20140205 YEAR OF FEE PAYMENT : 4
JP4452473 B2	20140205	LSLE	-LAPS	CANCELLATION BECAUSE OF NO PAYMENT OF ANNUAL FEES	
NO20061591 A	20060619	LSPB	+	published / reissued	
PL1663909 T3	20120731	LSGT	+	granted / extensions (spc, cpc, pte)	
PT1663909 T	20120308	LSGT	+	granted / extensions (spc, cpc, pte)	
SI1663909 T1	20121231	LSGT	+	granted / extensions (spc, cpc, pte)	
US2007044686 AA	20070301	LSPB	+	published / reissued	
US2007044686 AA	20061102	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; REEL/FRAME:018468/0814; SIGNING DATES FROM 20060811 TO 20060918
US2007044686 AA	20061110	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : RECORD TO CORRECT THE UNDERLYING ASSIGNMENT DOCUMENT PREVIOUSLY RECORDED ON REEL/FRAME 018468/0814; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; REEL/FRAME:018504/0528; SIGNING DATES FROM 20060811 TO 20060918
US7662230 BB	20100216	LSGT	+	granted / extensions (spc, cpc, pte)	
US7662230 BB	20061102	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; REEL/FRAME:018468/0814; SIGNING DATES FROM 20060811 TO 20060918
US7662230 BB	20061102	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH,GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; SIGNED BETWEEN 20060811 AND 20060918; US- ASSIGNMENT DATABASE UPDATED:20100216; REEL/FRAME:18468/814
US7662230 BB	20061102	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH,GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; SIGNING DATES FROM 20060811 TO 20060918; REEL/FRAME:018468/0814
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					CORRECT THE UNDERLYING ASSIGNMENT DOCUMENT PREVIOUSLY RECORDED ON REEL/FRAME 018468/0814; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; SIGNED BETWEEN 20060811 AND 20060918; US- ASSIGNMENT DATABASE UPDATED:20100216; REEL/FRAME:18504/528
US7662230 BB	20061110	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH, GERMANY DESCRIPTION : RECORD TO CORRECT THE UNDERLYING ASSIGNMENT DOCUMENT PREVIOUSLY RECORDED ON REEL/FRAME 018468/0814; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; REEL/FRAME:018504/0528; SIGNING DATES FROM 20060811 TO 20060918
US7662230 BB	20061110	LSAS	AS	ASSIGNMENT	OWNER NAME : CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH,GERMANY DESCRIPTION : RECORD TO CORRECT THE UNDERLYING ASSIGNMENT DOCUMENT PREVIOUSLY RECORDED ON REEL/FRAME 018468/0814; ASSIGNORS:ANGELSKAAR, TERJE; IWATA, RAITA; SIGNING DATES FROM 20060811 TO 20060918; REEL/FRAME:018504/0528
US7662230 BB	20100127	LSGT	PAT1	Patented Case	
US7662230 BB	20101130	LSRE	CC	CERTIFICATE OF CORRECTION	
US7662230 BB	20130314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
WO05028398 A1	20050331	LSPB	+	published / reissued	
WO05028398 A1	20060124	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2004764239 COUNTRY OF REF DOCUMENT : EP
WO05028398 A1	20060607	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2004764239 COUNTRY OF REF DOCUMENT : EP
WO05028398 A1	20061108	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007044686 COUNTRY OF REF DOCUMENT : US
WO05028398 A1	20061108	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 10571728 COUNTRY OF REF DOCUMENT : US
WO05028398 A1	20070301	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 10571728 COUNTRY OF REF DOCUMENT : US
WO05028398 A1	20080116	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO05028398 A1	20080116	LSWD	-WWW	WIPO INFORMATION: WITHDRAWN IN NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : JP

Title: CEMENT COMPOSITIONS AND ADMIXTURES THEREFORE

Abstract: Source: US6893496B Blended cement compositions for mixture with aggregate and water to prepare cementitious products. Such blended cement compositions contain cement, calcined diatomaceous earth, calcined kaolin, fibrous material and reactive vinyl acetate co-polymers, with or without talc and/or bentonite or their functional equivalents. Admixtures for blending into cement to create such blended cements or their read-mix equivalents contain calcined kaolin, calcined diatomaceous earth, fibrous material and reactive vinyl acetate co-polymers, with or without talc and/or bentonite or their functional equivalents.

Classifications:

International (IPC 8-9): C04B28/04 C04B40/00 (Advanced/Invention);
C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): C04B14/08 C04B14/38

CPC: Y10S106/04 C04B28/04 C04B40/0039 C04B2111/00146 C04B2111/34

European: C04B28/04 C04B40/00D4 M04B111/00M16 M04B111/34

US: 106/681 106/716 106/718 106/719 106/801 106/803 106/811 106/820 106/823 106/DIG.4 524/5 524/9

Family:

Publication number	Publication date	Application number	Application date
US6893496 BA	20050517	US20020320074	20021216

Priority:

US20020320074 20021216

Probable Assignee: UNIVERSAL WHITE CEMENT CO INC

Assignee(s): (std): UNIVERSAL WHITE CEMENT CO ; UNIVERSAL WHITE CEMENT COMPANY

Assignee(s): UNIVERSAL WHITE CEMENT COMPANY INC ; UNIVERSAL WHITE CEMENT CO INC ; UNIVER L WHITE CEMENT CO INC SA

Inventor(s): (std): LILJENQUIST VAUGHN R

Agent(s): MCGUE FRANK J; FRANK J

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
US6893496 BA	20050517	LSGT	+	granted / extensions (spc, cpc, pte)	
US6893496 BA	20021216	LSAS	AS	ASSIGNMENT	OWNER NAME : UNIVERSAL WHITE CEMENT COMPANY, INC, ARIZONA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:LITJENQUIEST, VAUGHN R.; REEL/FRAME:013584/0935 EFFECTIVE DATE : 20021206
US6893496 BA	20080625	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6893496 BA	20130517	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6893496 BA	20130517	LSRE	+REIN	REINSTATEMENT AFTER MAINTENANCE FEE PAYMENT CONFIRMED	
US6893496 BA	20130709	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20130517
US6893496 BA	20141201	LSRE	+PRDP	PATENT REINSTATED DUE TO THE ACCEPTANCE OF A LATE MAINTENANCE FEE	EFFECTIVE DATE : 20141202
US6893496 BA	20141202	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6893496 BA	20160718	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

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CN101175948 A	20080507	CN200580049750	20050421
CN101379004 A	20090304	CN200780004642	20070207
CN102352274 A	20120215	CN201110185900	20060316
CN102352274 B	20150121	CN201110185900	20060316
CN103759249 A	20140430	CN201410045288	20050421
CN103922621 A	20140716	CN201410105452	20070207
CN103922621 B	20160928	CN201410105452	20070207
EP1866057 A1	20071219	EP20060748464	20060316
EP1866057 A4	20150318	EP20060748464	20060316
EP1872054 A1	20080102	EP20050738526	20050421
EP1872054 A4	20150318	EP20050738526	20050421
EP1996526 A2	20081203	EP20070763425	20070207
IN04005CN2008 A	20090313	IN2008CN04005	20080731
IN07676DN2007 A	20071109	IN2007DN07676	20071005
IN07678DN2007 A	20071109	IN2007DN07678	20071005
IN10966DN2013 A	20141226	IN2013DN10966	20131219
IN271846 B	20160311	IN2007DN07678	20071005
IN274154 B	20160715	IN2007DN07676	20071005
JP2008533432 T2	20080821	JP20080502139T	20060316
JP2008537587 T2	20080918	JP20080501854T	20050421
JP2009526198 T2	20090716	JP20080554311T	20070207
RU2007138432 A	20090427	RU20070138432	20050421
RU2007138433 A	20090427	RU20070138433	20060316
RU2008136044 A	20100320	RU20080136044	20070207
RU2011129016 A	20130120	RU20110129016	20110713
RU2011138487 A	20130327	RU20110138487	20110920
RU2011138487 A	20130327	RU20110138487	20060316
RU2440179 C2	20120120	RU20070138433	20060316
RU2482389 C2	20130520	RU20110129016	20110713
RU2494793 C2	20131010	RU20110138487	20060316
TW200635658 A	20061016	TW20060109351	20060317
US2006210463 AA	20060921	US20060377528	20060316
US2007184394 AA	20070809	US20070702477	20070205
US2008121142 AA	20080529	US20060886269	20060316
US2009117019 AA	20090507	US20090351191	20090109
US2010139482 AA	20100610	US20100705196	20100212
US2010251938 AA	20101007	US20100813214	20100610
US2010323308 AA	20101223	US20100839154	20100719
US2011203499 AA	20110825	US20110098973	20110502
US2011281222 AA	20111117	US20110169187	20110627
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US2012272877 AA	20121101	US20120530364	20120622
US2013074745 AA	20130328	US20120679775	20121116
US2013312646 AA	20131128	US20130958950	20130805
US2014020608 AA	20140123	US20130036036	20130925
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US2014224158 AA	20140814	US20140254379	20140416
US2015096480 AA	20150409	US20140564277	20141209
US2016025337 AA	20160128	US20150877145	20151007
US2016327265 AA	20161110	US20160215022	20160720
US7507083 BB	20090324	US20060377528	20060316
US7674442 BB	20100309	US20090351191	20090109
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US8703081 BB	20140422	US20130036036	20130925
US8920158 BB	20141230	US20140163671	20140124
US9169453 BB	20151027	US20140254379	20140416
US9416967 BB	20160816	US20140564277	20141209
WO06099611 A1	20060921	WO2006US10000	20060316
WO06101499 A1	20060928	WO2005US13831	20050421
WO06101499 C1	20061221	WO2005US13831	20050421
WO07092504 A2	20070816	WO2007US03269	20070207
WO07092504 A3	20071129	WO2007US03269	20070207

Priority:

AU20050329401	20050421	AU20060225140	20060316	AU20120202115	20120412
AU20120202264	20120418	AU20140202214	20140423	CA20062814841	20060316
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RU20070138433 20060421	RU20070138433 20071017	US20100705196 20100612
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US20140564277 20141209	US20150877145 20151007	US20160215022 20160720

Probable Assignee: NOX II LTD

Assignee(s): (std): COMRIE DOUGLAS ; COMRIE DOUGLAS C ; NOX II LTD ; VELLELLA VINCENT ; NOX II INTERNATIONAL LTD ; NOX II INTERNAT LTD ; NOX II INT LTD ; NOKS II INTENEHSHNL EHLTIDI ; NOX LL LTD

Assignee(s): NOX II INT ; NOX II LTD3745 E. OVERLOOKPORT CLINTONOH43452US ; DOUGLAS C COMRIE ; DOUGLAS COMRIE

Inventor(s): (std): COMRIE DOUGLAS C ; DOUGLAS C COMRIE ; KOMRI DUGLAS S ; VELLELLA VINCENT ; VELLELLA VINSENT ; VINCENT VELLELLA

Inventor(s): COMRIE DOUGLAS ; VINCENT VELLELA ; DOUGLAS CHARLES COMRIE ; COMRIE DOUGLAS CUS

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FPA PATENT ATTORNEYS PTY LTD; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; SHELSTON IP; SHELSTON IP PTY LTD; RIDOUT AND MAYBEE LLP; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; SILVA; SPERLING RUEDIGER; EDLUND FABIAN; HARNESS DICKEY AND PIERCE PLC

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AR052612 AA	20070321	LSPB	+	published / reissued	
AR052612 AA	20090415	LSWD	-FB	SUSPENSION OF GRANTING PROCEDURE	
AU2005329401 AA	20060928	LSPB	+	published / reissued	
AU2005329401 AA	20120517	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2005329401 AA	20121011	LSRE	DA2	APPLICATIONS FOR AMENDMENT SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 22 AUG 2012 .
AU2005329401 AA	20130228	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 22 AUG 2012
AU2005329401 BB	20120119	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2006225140 AA	20060921	LSPB	+	published / reissued	
AU2006225140 AA	20071115	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS AS SHOWN IN THE STATEMENT(S) FILED 19 SEP 2007
AU2006225140 AA	20111222	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS: AMEND THE NAME OF THE INVENTOR TO READ COMRIE, DOUGLAS C.
AU2006225140 AA	20120517	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2006225140 BB	20120119	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2007212407 AA	20070816	LSPB	+	published / reissued	
AU2007212407 AA	20110120	LSLE	-MK1	APPLICATION LAPSED SECTION 142(2)(A) - NO REQUEST FOR EXAMINATION IN RELEVANT PERIOD	
AU2012202115 AA	20120503	LSPB	+	published / reissued	
AU2012202115 AA	20121108	LSRE	DA3	AMENDMENTS MADE SECTION 104	DESCRIPTION : THE NATURE OF THE AMENDMENT IS: AMEND THE INVENTION TITLE TO READ REDUCING MERCURY EMISSIONS FROM THE BURNING OF COAL

AU2012202115 AA	20140522	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2012202115 BB	20140123	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2012202264 AA	20120510	LSPB	+	published / reissued	
AU2012202264 AA	20141127	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2012202264 BB	20140731	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2014202214 AA	20140522	LSPB	+	published / reissued	
AU2014202214 AA	20161020	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2014202214 BB	20160623	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2014256383 AA	20141120	LSPB	+	published / reissued	
AU2014256383 AA	20161208	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2014256383 BB	20160804	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2016228203 AA	20161006	LSPB	+	published / reissued	
AU2016250355 AA	20161110	LSPB	+	published / reissued	
BRPI0519075 A2	20081223	LSPB	+	published / reissued	
BRPI0519075 A2	20120529	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	DESCRIPTION : REFERENTE AS 5A, 6A E 7A ANUIDADES.
BRPI0519075 A2	20121023	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)	DESCRIPTION : REFERENTE AO DESPACHO 8.6 PUBLICADO NA RPI 2160 DE 29/05/2012.
BRPI0606285 A2	20090609	LSPB	+	published / reissued	
BRPI0606285 A2	20120605	LSFE	-B08F	APPLICATION FEES: DISMISSAL - ARTICLE 86 OF INDUSTRIAL PROPERTY LAW	DESCRIPTION : REFERENTE AS 5A E 6A ANUIDADES.
BRPI0606285 A2	20121023	LSLE	-B08K	LAPSE AS NO EVIDENCE OF PAYMENT OF THE ANNUAL FEE HAS BEEN FURNISHED TO INPI (ACC. ART. 87)	DESCRIPTION : REFERENTE AO DESPACHO 8.6 PUBLICADO NA RPI 2161 DE 05/06/2012.
BRPI0707511 A2	20110510	LSPB	+	published / reissued	
BRPI0707511 A2	20120403	LSRV	-B11A	DISMISSAL ACC. ART.33 OF IPL - EXAMINATION NOT REQUESTED WITHIN 36 MONTHS OF FILING	
BRPI0707511 A2	20120731	LSRV	-B11Y	DEFINITIVE DISMISSAL ACC. ARTICLE 33 OF IPL - EXTENSION OF TIME LIMIT FOR REQUEST OF EXAMINATION EXPIRED	
CA2601239 AA	20060921	LSPB	+	published / reissued	
CA2601239 AA	20110128	LSES	+EEER	EXAMINATION REQUEST	
CA2601239 AA	20110209	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20110128
CA2601239 C	20130716	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2601325 AA	20070917	LSPB	+	published / reissued	
CA2601325 AA	20070917	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2601325 AA	20100414	LSES	+EEER	EXAMINATION REQUEST	
CA2601325 C	20140617	LSGT	+	granted / extensions (spc, cpc, pte)	
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CA2641311 AA	20120130	LSES	+EEER	EXAMINATION REQUEST	
CA2641311 AA	20120210	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20120130
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CA2814841 AA	20060921	LSPB	+	published / reissued	
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CA2814841 C	20150929	LSGT	+	granted / extensions (spc, cpc, pte)	
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CA2900444 AA	20060921	LSPB	+	published / reissued	
CA2900444 AA	20160125	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20160119
CA2900444 C	20161220	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2947877 AA	20060921	LSPB	+	published / reissued	
CA2952392 AA	20070816	LSPB	+	published / reissued	
CL2006000591 A1	20060929	LSPB	+	published / reissued	
CN101175550 A	20080507	LSPB	+	published / reissued	
CN101175550 A	20080507	LSPB	+C06	PUBLICATION	
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CN101175948 A	20080507	LSPB	+C06	PUBLICATION	
CN101175948 A	20140716	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CN101379004 A	20090304	LSPB	+	published / reissued	
CN101379004 A	20090304	LSPB	+C06	PUBLICATION	
CN101379004 A	20140903	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
CN102352274 A	20120215	LSPB	+	published / reissued	
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CN103922621 A	20140716	LSPB	+	published / reissued	
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EP1866057 A1	20071219	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20071017
EP1866057 A1	20150318	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20150216
EP1866057 A1	20150318	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : F23J 7/00 20060101ALI20150210BHEP
EP1866057 A1	20150318	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C10L 9/10 20060101ALI20150210BHEP
EP1866057 A1	20150318	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B01D 53/50 20060101ALI20150210BHEP

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EP1866057 A1	20150318	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : B01D 53/64 20060101AFI20150210BHEP
EP1866057 A1	20150318	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : F23K 1/00 20060101ALI20150210BHEP
EP1866057 A1	20151223	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20151119
EP1872054 A1	20080102	LSPB	+	published / reissued	
EP1872054 A1	20080102	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20071017
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EP1996526 A2	20081203	LSPB	+	published / reissued	
EP1996526 A2	20081203	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20080905

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IN07676DN2007 A	20071109	LSPB	+	published / reissued	
IN07678DN2007 A	20071109	LSPB	+	published / reissued	
IN10966DN2013 A	20141226	LSPB	+	published / reissued	
IN271846 B	20160311	LSGT	+	granted / extensions (spc, cpc, pte)	
IN274154 B	20160715	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2008533432 T2	20080821	LSPB	+	published / reissued	
JP2008537587 T2	20080918	LSPB	+	published / reissued	
JP2008537587 T2	20100929	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100928
JP2008537587 T2	20100929	LSSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20100928
JP2008537587 T2	20110309	LSRV	-A02	DECISION OF REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A02 EFFECTIVE DATE : 20110308
JP2009526198 T2	20090716	LSPB	+	published / reissued	
RU2007138432 A	20090427	LSPB	+	published / reissued	
RU2007138432 A	20100410	LSWD	-FA92	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	EFFECTIVE DATE : 20100216
RU2007138432 A	20110410	LSRE	+FZ9A	APPLICATION NOT WITHDRAWN (CORRECTION OF THE NOTICE OF WITHDRAWAL)	EFFECTIVE DATE : 20110214
RU2007138432 A	20120310	LSWD	-FA94	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NON- PAYMENT OF FEES)	EFFECTIVE DATE : 20120111
RU2007138433 A	20090427	LSPB	+	published / reissued	
RU2007138433 A	20110210	LSWD	-FA92	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	EFFECTIVE DATE : 20101217
RU2007138433 A	20110410	LSRE	+FZ9A	APPLICATION NOT WITHDRAWN (CORRECTION OF THE NOTICE OF WITHDRAWAL)	EFFECTIVE DATE : 20110207
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RU2008136044 A	20100620	LSWD	-FA93	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (NO REQUEST FOR EXAMINATION)	EFFECTIVE DATE : 20100208
RU2011129016 A	20130120	LSPB	+	published / reissued	
RU2011138487 A	20130327	LSPB	+	published / reissued	
RU2011138487 A	20130327	LSPB	+	published / reissued	
RU2440179 C2	20120120	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2440179 C2	20110210	LSWD	-FA92	ACKNOWLEDGEMENT OF APPLICATION WITHDRAWN (LACK OF SUPPLEMENTARY MATERIALS SUBMITTED)	EFFECTIVE DATE : 20101217
RU2440179 C2	20110410	LSRE	+FZ9A	APPLICATION NOT WITHDRAWN (CORRECTION OF THE NOTICE OF WITHDRAWAL)	EFFECTIVE DATE : 20110207
RU2482389 C2	20130520	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2494793 C2	20131010	LSGT	+	granted / extensions (spc, cpc, pte)	

TW200635658 A	20061016	LSPB	+	published / reissued	
US2006210463 AA	20060921	LSPB	+	published / reissued	
US2007184394 AA	20070809	LSPB	+	published / reissued	
US2007184394 AA	20111213	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRAME:027375/0903 EFFECTIVE DATE : 20070522
US2007184394 AA	20161126	LSWD	-ABD3	Abandoned -- Failure to Respond to an Office Action	
US2008121142 AA	20080529	LSPB	+	published / reissued	
US2008121142 AA	20071206	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II INTERNATIONAL, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRAME:020205/0070 EFFECTIVE DATE : 20071121
US2008121142 AA	20091203	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NOX II INTERNATIONAL, LTD.; REEL/FRAME:023600/0687 EFFECTIVE DATE : 20091202
US2009117019 AA	20090507	LSPB	+	published / reissued	
US2010139482 AA	20100610	LSPB	+	published / reissued	
US2010251938 AA	20101007	LSPB	+	published / reissued	
US2010323308 AA	20101223	LSPB	+	published / reissued	
US2010323308 AA	20110315	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRAME:025957/0951 EFFECTIVE DATE : 20110315
US2011203499 AA	20110825	LSPB	+	published / reissued	
US2011281222 AA	20111117	LSPB	+	published / reissued	
US2012100490 AA	20120426	LSPB	+	published / reissued	
US2012272877 AA	20121101	LSPB	+	published / reissued	
US2013074745 AA	20130328	LSPB	+	published / reissued	
US2013312646 AA	20131128	LSPB	+	published / reissued	
US2014020608 AA	20140123	LSPB	+	published / reissued	
US2014020608 AA	20140227	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRAME:032315/0866 EFFECTIVE DATE : 20130916
US2014141380 AA	20140522	LSPB	+	published / reissued	
US2014141380 AA	20140725	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS; REEL/FRAME:033392/0789 EFFECTIVE DATE : 20140723
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US2014224158 AA	20140623	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRAME:033155/0789 EFFECTIVE DATE : 20140613
US2015096480 AA	20150409	LSPB	+	published / reissued	
US2015096480 AA	20150616	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST;

ASSIGNOR:COMRIE, DOUGLAS
C.; REEL/FRA:035842/0947
EFFECTIVE DATE : 20150609

US2016025337 AA	20160128	LSPB	+	published / reissued	
US2016025337 AA	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : NOX II, LTD., ILLINOIS OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRA:041360/0709 EFFECTIVE DATE : 20170209
US2016025337 AA	20170310	LSSES	+NAM1	Notice of Allowance Mailed -- Application Received in Office of Publications	
US2016327265 AA	20161110	LSPB	+	published / reissued	
US2016327265 AA	20160802	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRA:039312/0085 EFFECTIVE DATE : 20160727
US7507083 BB	20090324	LSGT	+	granted / extensions (spc, cpc, pte)	
US7507083 BB	20090304	LSGT	PAT1	Patented Case	
US7507083 BB	20111213	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRA:027375/0903 EFFECTIVE DATE : 20070522
US7507083 BB	20120914	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
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US7674442 BB	20100309	LSGT	+	granted / extensions (spc, cpc, pte)	
US7674442 BB	20100217	LSGT	PAT1	Patented Case	
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US7758827 BB	20100720	LSGT	+	granted / extensions (spc, cpc, pte)	
US7758827 BB	20071206	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II INTERNATIONAL, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRA:020205/0070 EFFECTIVE DATE : 20071121
US7758827 BB	20071206	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II INTERNATIONAL, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:COMRIE, DOUGLAS C.; REEL/FRA:20205/70 EFFECTIVE DATE : 20071121
US7758827 BB	20091203	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NOX II INTERNATIONAL, LTD.; REEL/FRA:023600/0687 EFFECTIVE DATE : 20091202
US7758827 BB	20091203	LSAS	AS	ASSIGNMENT	OWNER NAME : NOX II, LTD., OHIO DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:NOX II INTERNATIONAL, LTD.; REEL/FRA:23600/687 EFFECTIVE DATE : 20091202
US7758827 BB	20100630	LSGT	PAT1	Patented Case	
US7758827 BB	20110628	LSRE	CC	CERTIFICATE OF CORRECTION	
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US7776301 BB	20100817	LSGT	+	granted / extensions (spc, cpc, pte)	
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US7955577 BB	20110607	LSGT	+	granted / extensions (spc, cpc, pte)	
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US8313323 BB	20121031	LSGT	PAT1	Patented Case	
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US8545778 BB	20131001	LSGT	+	granted / extensions (spc, cpc, pte)	
US8545778 BB	20130911	LSGT	PAT1	Patented Case	
US8545778 BB	20170227	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8658115 BB	20140225	LSGT	+	granted / extensions (spc, cpc, pte)	
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US8920158 BB	20141230	LSGT	+	granted / extensions (spc, cpc, pte)	
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US9169453 BB	20151027	LSGT	+	granted / extensions (spc, cpc, pte)	
US9416967 BB	20160816	LSGT	+	granted / extensions (spc, cpc, pte)	
US9416967 BB	20151222	LSES	NFA1	Non Final Action Mailed	
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WO06099611 A1	20090609	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0606285 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2
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WO06101499 C1	20070917	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2601325 COUNTRY OF REF DOCUMENT : CA
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WO07092504 A3	20080806	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 200780004642.7 COUNTRY OF REF DOCUMENT : CN
WO07092504 A3	20080806	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2008554311 COUNTRY OF REF DOCUMENT : JP
WO07092504 A3	20080806	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007212407 COUNTRY OF REF DOCUMENT : AU
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WO07092504 A3	20080908	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2008136044 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO07092504 A3	20110510	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : PI0707511 COUNTRY OF REF DOCUMENT : BR KIND CODE OF REF DOCUMENT : A2 EFFECTIVE DATE : 20080806

Title: ADDITIVES AND METHODS FOR REDUCING HEXAVALENT CHROMIUM IN CEMENT

Abstract: Source: US2010170420A A method for reducing hexavalent chromium in cement comprising the addition, to said cement, of antimony (III) compounds as reducing agents.

Classifications:

International (IPC 8-9): C04B14/00 C04B16/00 C04B22/00 C04B24/00 C04B24/04 C04B28/02 C04B40/00 C25B1/04 H01M8/04 H01M8/24 H04L29/06 (Advanced/Invention);

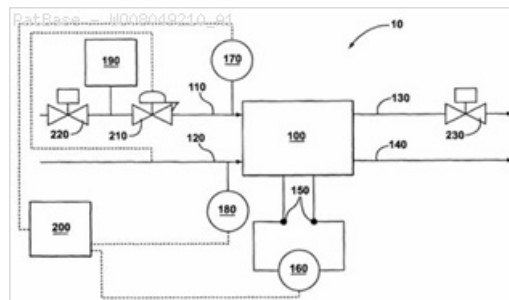
C04B103/52 C04B111/10 H04L29/06 (Advanced/Non-invention); C04B14/00 C04B16/00 C04B22/00 C04B24/00 C04B28/00 C04B40/00 C25B1/00 H01M8/04 H01M8/24 (Core/Invention)

International (IPC 1-7): C04B22/00 C04B24/00 C04B24/24 C04B28/02 C04B40/00

CPC: H01M8/04246 H01M2008/1095 H01M8/04089 H01M8/04223 H01M8/04231 H01M8/04388 H01M8/04753 Y02E60/50 H01M8/0438 H04L29/06163 C04B22/00 C04B2103/0086 C04B2103/44 C04B22/124 C04B24/06 H04L69/18 C04B28/02 C04B40/0039 C04B2103/52 C04B2111/1081

European: C04B28/02 C04B40/00D4 H01M8/04C2 H01M8/04C8F H01M8/04H4D2 H04L12/46B7B H04L12/46V1A3 H04L49/00 M04B103/52 M04B111/10S2 T01M8/10P

US: 1/1 106/638 106/638S 106/735 106/739 106/739S 106/802 106/802S 106/808 106/808S 106/810 106/810S 106/815 106/815S 106/817 106/817S 106/819 106/819S 106/823 106/823S 370/255P 429/408 429/427 429/428 429/428P 429/429 429/430 429/431 429/432 429/443 429/444 429/446



Family:

Publication number	Publication date	Application number	Application date
DE602007025494 D1	20121108	DE200760025494T	20071026
EG26517 A	20140109	EG20090050621	20090503
EP1923370 A1	20080521	EP20060022808	20061102
EP2077979 A2	20090715	EP20070848831	20071026
EP2077979 B1	20120912	EP20070848831	20071026
EP2077979 B2	20160427	EP20070848831	20071026
ES2395423 T3	20130212	ES20070848831T	20071026
ES2395423 T5	20160909	ES20070848831T	20071026
HR20120875 T1	20121130	HR20120000875	20121030
HR20120875 T4	20160812	HR20120000875	20121030
MA30961 B1	20091201	MA20090031940	20090601
PL2077979 T5	20170428	PL20070848831T	20071026
TN2009000153 A1	20101018	TN20090000153	20090422
US2010170420 AA	20100708	US20070446868	20071026
US2011097635 AA	20110428	US20070446858	20071023
US8765318 BB	20140701	US20070446858	20071023
US9160603 BB	20151013	US20070446868	20071026
WO08049210 A1	20080502	WO2007C A01881	20071023
WO08053305 A2	20080508	WO20071B03235	20071026
WO08053305 A3	20080626	WO20071B03235	20071026

Priority:

EP20060022808 20061102 EP20070848831 20071026 US20060862559P 20061023
WO2007CA01881 20071023 US20070440868 20071218 WO20071B03235 20071026

Probable Assignee: MAPEI SPA

Assignee(s): (std): ABOUATALLAH RAMI MICHEL ; D ARCANCGELO POTITO ; D ARCANGELO POTITO ; HYDROGENICS CORP ; MAGISTRI MATTEO ; QUATTROCIOCCHI SONIA ; SIMPSON TODD ARNOLD ; MAPEI SPA ; SQUINZI MARCO

Assignee(s): 7188501 CANADA INC ; MAPEI S P A

Inventor(s): (std): D ARCANGELO POTITO ; D ARCANCGELO POTITO ; SIMPSON TODD ARNOLD ; QUATTROCIOCCHI SONIA ; ABOUATALLAH RAMI MICHEL ; SQUINZI MARCO ; MAGISTRI MATTEO

Inventor(s): D'ARCANCGELO POTITO

Agent(s): ZSP PATENTANWALTE PARTG MBB; BIANCHETTI GIUSEPPE; MINOJA FABRIZIO; MAIWALD PATENTANWALTS GMBH; CARPINTERO MARIO; MATHEWS SHEPHERD MCKAY AND BRUNEAU PA; SCOTT; BORDEN LADNER GERVAIS LLP; SILVIA SALVADORI PC; BERESKIN AND PARR; MINOJA FABRIZIO ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
EG26517 A	20140109	LSGT	+	granted / extensions (spc, cpc, pte)	
EP1923370 A1	20080521	LSPB	+	published / reissued	
EP1923370 A1	20090128	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESIGNATED STATE(S) : AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

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EP1923370 A1	20100217	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20100115
EP1923370 A1	20110608	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20101216
EP2077979 A2	20090715	LSPB	+	published / reissued	
EP2077979 A2	20090715	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20090505
EP2077979 A2	20100217	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20100114
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EP2077979 A2	20120914	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
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EP2077979 A2	20130207	LSOP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R026 REF DOCUMENT NUMBER : 602007025494 COUNTRY OF REF DOCUMENT : DE EFFECTIVE DATE : 20121109

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EP2077979 A2	20130717	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : MM4A
EP2077979 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : CH NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20121031
EP2077979 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : DK NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120912
EP2077979 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : BG NOTIFICATIONOFLAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20121212

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EP2077979 A2	20130731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LI NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20121031
EP2077979 A2	20131129	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : MT NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20120912
EP2077979 A2	20140530	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : LU NOTIFICATION OF LAPSE : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES LAPSED DATE : 20121026
EP2077979 A2	20140731	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	COUNTRY OF REF DOCUMENT : HU NOTIFICATION OF LAPSE : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT LAPSED DATE : 20071026
EP2077979 A2	20151030	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20150928 YEAR OF FEE PAYMENT : 9
EP2077979 A2	20151102	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 9
EP2077979 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20151027 YEAR OF FEE PAYMENT : 9
EP2077979 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20151030 YEAR OF FEE PAYMENT : 9
EP2077979 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20151005 YEAR OF FEE PAYMENT : 9
EP2077979 A2	20160129	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20151013 YEAR OF FEE PAYMENT : 9
EP2077979 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20150928 YEAR OF FEE PAYMENT : 9
EP2077979 A2	20160229	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20151102 YEAR OF FEE PAYMENT : 9
EP2077979 A2	20160427	LSRE	27A	MAINTAINED AS AMENDED	EFFECTIVE DATE : 20160427
EP2077979 A2	20160427	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : R102 REF DOCUMENT NUMBER : 602007025494 COUNTRY OF REF DOCUMENT : DE
EP2077979 A2	20160909	LSRE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : DC2A

					REF DOCUMENT NUMBER : 2395423 COUNTRY OF REF DOCUMENT : ES KIND CODE OF REF DOCUMENT : T5 DESIGNATED STATE(S) : EFFECTIVE DATE : 20160909
EP2077979 A2	20161031	LSFE	REG	REFERENCE TO A NATIONAL CODE	COUNTRY OF REF DOCUMENT : FR REF COUNTRY CODE : FR REF LEGAL EVENT CODE : PLFP YEAR OF FEE PAYMENT : 10
EP2077979 A2	20161130	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : PL PAYMENT DATE : 20160928 YEAR OF FEE PAYMENT : 10
EP2077979 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : TR PAYMENT DATE : 20160930 YEAR OF FEE PAYMENT : 10
EP2077979 A2	20161230	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : BE PAYMENT DATE : 20160929 YEAR OF FEE PAYMENT : 10
EP2077979 A2	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : DE PAYMENT DATE : 20161110 YEAR OF FEE PAYMENT : 10
EP2077979 A2	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : FR PAYMENT DATE : 20161031 YEAR OF FEE PAYMENT : 10
EP2077979 A2	20170131	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : GB PAYMENT DATE : 20161031 YEAR OF FEE PAYMENT : 10
EP2077979 A2	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : IT PAYMENT DATE : 20161012 YEAR OF FEE PAYMENT : 10
EP2077979 A2	20170228	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	COUNTRY OF REF DOCUMENT : ES PAYMENT DATE : 20161010 YEAR OF FEE PAYMENT : 10
EP2077979 B1	20120912	LSGT	+	granted / extensions (spc, cpc, pte)	
EP2077979 B2	20160427	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2395423 T3	20130212	LSGT	+	granted / extensions (spc, cpc, pte)	
HR20120875 T1	20121130	LSPB	+	published / reissued	
MA30961 B1	20091201	LSGT	+	granted / extensions (spc, cpc, pte)	
PL2077979 T5	20170428	LSGT	+	granted / extensions (spc, cpc, pte)	
TN2009000153 A1	20101018	LSPB	+	published / reissued	
US2010170420 AA	20100708	LSPB	+	published / reissued	
US2010170420 AA	20091110	LSAS	AS	ASSIGNMENT	OWNER NAME : MAPEI S.P.A., ITALY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:MAGISTRI, MATTEO; D'ARCANGELO, POTITO; SQUINZI, MARCO; REEL/FRAME:023495/0535 EFFECTIVE DATE : 20090512
US2010170420 AA	20091110	LSAS	AS	ASSIGNMENT	OWNER NAME : MAPEI S.P.A.,ITALY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST;

					ASSIGNORS:MAGISTRI, MATTEO; D'ARCANGELO, POTITO; SQUINZI, MARCO; REEL/FRAME:23495/535 EFFECTIVE DATE : 20090512
US2011097635 AA	20110428	LSPB	+	published / reissued	
US2011097635 AA	20091002	LSAS	AS	ASSIGNMENT	OWNER NAME : HYDROGENICS CORPORATION, CANADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:QUATTROCIOCCI, SONIA, MS.; ABOUATALLAH, RAMI MICHEL; REEL/FRAME:023318/0923 EFFECTIVE DATE : 20090420
US2011097635 AA	20100609	LSAS	AS	ASSIGNMENT	OWNER NAME : HYDROGENICS CORPORATION, CANADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SIMPSON, TODD ARNOLD, MR.; REEL/FRAME:024506/0858 EFFECTIVE DATE : 20100607
US2011097635 AA	20110902	LSAS	AS	ASSIGNMENT	OWNER NAME : HYDROGENICS CORPORATION, CANADA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:7188501 CANADA INC.; REEL/FRAME:026851/0286 EFFECTIVE DATE : 20091027
US2011097635 AA	20110902	LSAS	AS	ASSIGNMENT	OWNER NAME : 7188501 CANADA INC., CANADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HYDROGENICS CORPORATION; REEL/FRAME:026850/0796 EFFECTIVE DATE : 20091027
US8765318 BB	20140701	LSGT	+	granted / extensions (spc, cpc, pte)	
US8765318 BB	20091002	LSAS	AS	ASSIGNMENT	OWNER NAME : HYDROGENICS CORPORATION, CANADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:QUATTROCIOCCI, SONIA, MS.; ABOUATALLAH, RAMI MICHEL; REEL/FRAME:023318/0923 EFFECTIVE DATE : 20090420
US8765318 BB	20100609	LSAS	AS	ASSIGNMENT	OWNER NAME : HYDROGENICS CORPORATION, CANADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:SIMPSON, TODD ARNOLD, MR.; REEL/FRAME:024506/0858 EFFECTIVE DATE : 20100607
US8765318 BB	20110902	LSAS	AS	ASSIGNMENT	OWNER NAME : 7188501 CANADA INC., CANADA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:HYDROGENICS CORPORATION; REEL/FRAME:026850/0796 EFFECTIVE DATE : 20091027
US8765318 BB	20110902	LSAS	AS	ASSIGNMENT	OWNER NAME : HYDROGENICS CORPORATION, CANADA DESCRIPTION : CHANGE OF NAME; ASSIGNOR:7188501 CANADA INC.; REEL/FRAME:026851/0286 EFFECTIVE DATE : 20091027
US8765318 BB	20140611	LSGT	PAT1	Patented Case	
US9160603 BB	20151013	LSGT	+	granted / extensions (spc, cpc, pte)	
US9160603 BB	20150923	LSGT	PAT1	Patented Case	
WO08049210 A1	20080502	LSPB	+	published / reissued	
WO08049210 A1	20090424	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

WO08049210 A1	20101015	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12446858 COUNTRY OF REF DOCUMENT : US
WO08053305 A2	20080508	LSPB	+	published / reissued	
WO08053305 A3	20090505	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO08053305 A3	20100315	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12446868 COUNTRY OF REF DOCUMENT : US

Title: VERY FAST SETTING CEMENTITIOUS COMPOSITION WITH HIGH EARLY-AGE COMPRESSIVE STRENGTH

Abstract: Source: US2008302276A A method of making a rapid setting composition for cement boards is disclosed. Compositions including portland cement, fly ash, gypsum, alkanolamine and phosphate are disclosed. A synergistic interaction between the alkanolamine and phosphate increases the effectiveness of accelerating reactions thus allowing for quick setting and increased early-age compressive strength compositions.

Classifications:

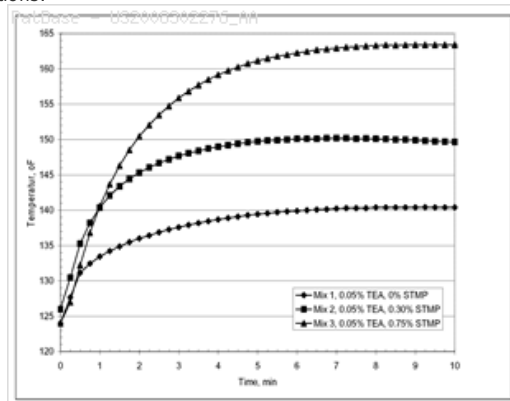
International (IPC 8-9): C04B14/10 C04B22/06 C04B22/08
C04B22/14 C04B22/16 C04B24/02 C04B24/06 C04B24/12
C04B24/16 C04B24/20 C04B28/04 C04B28/34
C04B7/00 (Advanced/Invention);

C04B14/02 C04B22/00 C04B24/00 C04B28/00
C04B7/00 (Core/Invention)

CPC: C04B28/04 C04B28/065 C04B2103/12 Y02W30/92

European: C04B28/04 C04B28/06B M04B103/12

US: 106/690 106/727 106/819 106/823



Family:

Publication number	Publication date	Application number	Application date
CA2685408 AA	20081218	CA20082685408	20080530
CA2685408 C	20160913	CA20082685408	20080530
CL2008001547 A1	20080912	CL20080001547	20080528
EP2152645 A1	20100217	EP20080769863	20080530
EP2152645 A4	20101027	EP20080769863	20080530
EP2152645 B1	20170419	EP20080769863	20080530
JP2010528972 T2	20100826	JP20100511258T	20080530
JP5309382 B2	20131009	JP20100511258T	20080530
MX2009011780 A1	20091209	MX20090011780	20080530
US2008302276 AA	20081211	US20070758947	20070606
US7670427 BB	20100302	US20070758947	20070606
WO08154179 A1	20081218	WO2008US65228	20080530

Priority:

US20070758947 20070606 WO2008US65228 20080530

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): PENG YANFEI ; PEREZ PENA MARIANELA ; UNITED STATES GYPSUM CO ; VEERAMASUNENI SRINIVAS

Assignee(s): UNITED STATES GYPSUM COMPANY

Inventor(s): (std): PENG YANFEI ; PEREZ PENA MARIANELA ; PEREZ PENA MARIANELA PENG YANF ; VEERAMASUNENI SRINIVAS

Inventor(s): YANFEI PENG ; MARIANELA PEREZ PENA ; PEREZ PENA MARIANELA PENG YANFEI VEERAMASUNENI SRINIVAS ; PEREZ PENA MARIANELA PENG YANFEI VEERAMASUNENI... ; SRINIVAS VEERAMASUNENI

Agent(s): GOWLING WLG CANADA LLP; ALESSANDRI AND COMPANIA; RIPAMONTI ENRICO; FINDLAY ALICE ROSEMARY; NOVAK DRUCE AND QUIGG LLP ANTHONY P VENTURINO; NOVAK DRUCE AND QUIGG LLP; VENTURINO ANTHONY P

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2685408 AA	20081218	LSPB	+	published / reissued	
CA2685408 AA	20091027	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2685408 AA	20130529	LSSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20130516
CA2685408 C	20160913	LSGT	+	granted / extensions (spc, cpc, pte)	
CL2008001547 A1	20080912	LSPB	+	published / reissued	
EP2152645 A1	20100217	LSPB	+	published / reissued	
EP2152645 A1	20100217	LSSES	+17P	REQUEST FOR EXAMINATION	EFFECTIVE DATE : 20091210

EP2152645 A1	20101027	LSES	+A4	FILED DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20100927
EP2152645 A1	20130612	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20130508
EP2152645 A1	20161228	LSGT	+INTG	ANNOUNCEMENT OF INTENTION TO GRANT	EFFECTIVE DATE : 20161129
EP2152645 A1	20170419	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
EP2152645 A1	20170428	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP2152645 A1	20170515	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : AT REF LEGAL EVENT CODE : REF REF DOCUMENT NUMBER : 885766 COUNTRY OF REF DOCUMENT : AT KIND CODE OF REF DOCUMENT : T DESIGNATED STATE(S) : EFFECTIVE DATE : 20170515
EP2152645 B1	20170419	LSGT	+	granted / extensions (spc, cpc, pte)	
JP2010528972 T2	20100826	LSPB	+	published / reissued	
JP2010528972 T2	20110527	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20110526
JP2010528972 T2	20120211	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20120125
JP2010528972 T2	20120725	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120724
JP2010528972 T2	20121018	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20121017
JP2010528972 T2	20130313	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130312
JP2010528972 T2	20130322	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20130321
JP2010528972 T2	20130507	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2010528972 T2	20130515	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20130514
JP2010528972 T2	20130704	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20130613
JP2010528972 T2	20130712	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP5309382 B2	20131009	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5309382 B2	20110527	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20110526
JP5309382 B2	20120211	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A821 EFFECTIVE DATE : 20120125
JP5309382 B2	20120725	LSES	-A131	NOTIFICATION	DESCRIPTION : JAPANESE

				OF REASONS FOR REFUSAL	INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120724
JP5309382 B2	20121018	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20121017
JP5309382 B2	20130313	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130312
JP5309382 B2	20130322	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20130321
JP5309382 B2	20130507	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP5309382 B2	20130515	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20130514
JP5309382 B2	20130704	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20130613
JP5309382 B2	20130712	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP5309382 B2	20160705	LSFE	+R250	RECEIPT OF ANNUAL FEES	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R250
MX2009011780 A1	20091209	LSPB	+	published / reissued	
MX2009011780 A1	20100831	LSRE	HH	CORRECTION OR CHANGE IN GENERAL	
MX2009011780 A1	20100907	LSGT	+FG	GRANT OR REGISTRATION	
US2008302276 AA	20081211	LSPB	+	published / reissued	
US2008302276 AA	20070606	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITED STATES GYPSUM COMPANY, ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: PEREZ-PENA, MARIANELA, MS.; PENG, YANFEI, MR.; VEERAMASUNENI, SRINIVAS, MR.; REEL/FRAME:019391/0093 EFFECTIVE DATE : 20070605
US7670427 BB	20100302	LSGT	+	granted / extensions (spc, cpc, pte)	
US7670427 BB	20070606	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITED STATES GYPSUM COMPANY, ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: PEREZ-PENA, MARIANELA, MS.; PENG, YANFEI, MR.; VEERAMASUNENI, SRINIVAS, MR.; REEL/FRAME:019391/0093 EFFECTIVE DATE : 20070605
US7670427 BB	20070606	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITED STATES GYPSUM COMPANY, ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: PEREZ-PENA, MARIANELA, MS.; PENG, YANFEI, MR.; VEERAMASUNENI, SRINIVAS, MR.; REEL/FRAME:019391/0093 EFFECTIVE DATE : 20070605
US7670427 BB	20070606	LSAS	AS	ASSIGNMENT	OWNER NAME : UNITED STATES GYPSUM COMPANY, ILLINOIS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS: PEREZ-PENA, MARIANELA, MS.; PENG, YANFEI, MR.; VEERAMASUNENI, SRINIVAS, MR.; US-ASSIGNMENT DATABASE UPDATED: 20100302; REEL/FRAME: 19391/93

US7670427 BB	20100210	LSGT	PAT1	Patented Case	
US7670427 BB	20130903	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
WO08154179 A1	20081218	LSPB	+	published / reissued	
WO08154179 A1	20091027	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2685408 COUNTRY OF REF DOCUMENT : CA
WO08154179 A1	20091028	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010511258 COUNTRY OF REF DOCUMENT : JP
WO08154179 A1	20091208	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: MODIFIER FOR CONCRETE AND CEMENT FORMULATIONS AND METHODS OF PREPARING THE SAME

Abstract: Source: US2009235844A Disclosed are wax emulsion modifiers for concrete and cement formulations and methods for preparing the same. The modifiers are applicable to roller compacted concrete (RCC), used for manufacturing of industrial floor slabs, dams and roads. This invention also relates to conventional Portland cement concrete mix designs or other applied concrete mixes for formed structural shapes and transport road mix designs, providing a more rapid dehydration of the aqueous phase, without sacrificing strength, yet providing a higher density that remains workable at the point of application. The modifier of the invention may be utilized for either the initial soil/cement base or for the final/finished placement.

Classifications:

International (IPC 8-9): C04B16/00 C04B16/04 C04B24/00 C04B24/08 C04B24/24 C04B28/02 C04B28/04 C04B38/00 C04B40/00 C09K3/00 (Advanced/Invention);
C04B16/00 C04B40/00 C09K3/00 (Core/Invention)

International (IPC 1-7): C04B16/00 C09K3/00

CPC: Y02W30/92 C04B40/0039 C04B28/04 C04B2111/00068 C04B2111/0075

European: C04B28/04 C04B40/00D4 M04B111/00M4 M04B111/00T26

US: 106/660 106/677 106/696 106/724 106/822 106/822S 106/823 252/182.12 252/182.120S 252/182.3 252/182.300S

Family:

Publication number	Publication date	Application number	Application date
AU2009225634 AA	20090924	AU20090225634	20090318
AU2009225634 BB	20140925	AU20090225634	20090318
AU2009225652 AA	20090924	AU20090225652	20090318
AU2009225652 BB	20140828	AU20090225652	20090318
CA2718529 AA	20090924	CA20092718529	20090318
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CA2718530 AA	20090924	CA20092718530	20090318
CA2718530 C	20140722	CA20092718530	20090318
CN101990524 A	20110323	CN200980112618	20090318
EP2257504 A2	20101208	EP20090721937	20090318
EP2257504 A4	20120711	EP20090721937	20090318
EP2260010 A2	20101215	EP20090722022	20090318
EP2260010 A4	20120711	EP20090722022	20090318
IN05791CN2010 A	20110415	IN2010CN05791	20100916
MX2010010055 A1	20100930	MX20100010055	20090318
MX2010010058 A1	20100930	MX20100010058	20090318
RU2010142636 A	20120427	RU20100142636	20090318
RU2492152 C2	20130910	RU20100142636	20090318
US2009235844 AA	20090924	US20090406579	20090318
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US2012210910 AA	20120823	US20120453819	20120423
US8202363 BB	20120619	US20090406579	20090318
US8252106 BB	20120828	US20090406840	20090318
WO09117502 A2	20090924	WO2009US37536	20090318
WO09117502 A3	20100107	WO2009US37536	20090318
WO09117502 A8	20110324	WO2009US37536	20090318
WO09117520 A2	20090924	WO2009US37568	20090318
WO09117520 A3	20100318	WO2009US37568	20090318

Priority:

US20080037761 20080319	US20080037761P 20080319	US20090406579 20090318
US20090406840 20090318	WO2009US37568 20090318	WO2009US37536 20090318
US20120453819 20120423		

Probable Assignee: MOMENTIVE SPECIALTY CHEMICALS INC

Assignee(s): (std): HEXION SPECIALTY CHEMICALS INC ; HEXION SPECIALTY CHEMICALS RES ; WANTLING STEVEN J ; MOMENTIVE SPECIALTY CHEMICALS INC ; MOMENTIVE SPECIALTY CHEMICALS RES BELGIUM S A ; MOMENTIVE SPECIALTY CHEMICALS RES BELGIUM ; MOMENTIVE SPECIALTY CHEM INC ; MOMENTIVE SPECIALTY CHEMICALS RES BELGIUM SA ; MOUMENTIV SPESHELTI KEMIKALS INK

Assignee(s): MOMENTIVE SPECIALTY CHEMICALS INC F K A HEXION SPECIALTY CHEMICALS INC ; MOMENTIVE SPECIALTY CHEMICALS INC180 EAST BROAD STREETCOLUMBUSOH43215US ; MOMENTIVE SPECIALTY CHEMICALS RESEARCH BELGIUM SA ; LAWTER INT INC ; OILFIELD TECHNOLOGY GROUP INC ; MOMENTIVE SPECIALTY CHCALS INC ; WILMINGTON TRUST CO COLLATERAL AGENT AS ; WILMINGTON TRUST NATIONAL ASSOCIATION ; MOMENTIVE SPECIALTY CHEMICALS RESEARCH BELGIUM ; MOMENTIVE SPECIALTY CHEMICALS RESEARCH BELGIUM S A ; JPMORGAN CHASE BANK NA ADMINISTRATIVE AGENT AS ; WILMINGTON TRUST FSB COLLATERAL AGENT AS ; JPMORGAN CHASE BANK NA ; HEXION SPECIALTY CHEMICALS INC180 EAST BROAD STREETCOLUMBUSOH43215US ; HEXION SPECIALTY CHEMICALS RESEARCH BELGIUM SA ; HEXION INVESTMENTS INC WAS KNOWN AS BORDEN CHEMICAL INVESTMENTS INC.. ; HEXION US FINANCE CORP ; HSC CAPITAL CORP ; BORDEN CHEMICAL FOUNDRY LLC ; HEXION CI HOLDING CO CHINA LLC ; HEXION INC WAS KNOWN AS HEXION SPECIALTY CHEMICALS INC.. ; HEXION INC WAS KNOWN AS MOMENTIVE SPECIALTY CHEMICALS INC.. ; HEXION INT INC WAS KNOWN AS BORDEN CHEMICAL INTERNATIONAL INC.. ; HEXION SPECIALTY CHEMICALS RESEARCH BELGIUM S A

Inventor(s): (std): HEXION SPECIALTY CHEMICALS RES ; UONTLING STIVEN DZH ; WANTLING STEVEN J

Inventor(s): WANTLING STEVEN JUS ; WANTLING STEVEN ; HEXION SPECIALTY CHEMICALS RESEARCH BELGIUM S A ; HEXION SPECIALTY CHEMICALS RESEARCH BELGIUM SA ; STEVEN J WANTLING

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; HEXION SPECIALTY CHEMICALS INC; JONES LISA KIMES

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)
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Patent	Date recorded	Event group	Code	Event	Details
AU2009225634 AA	20090924	LSPB	+	published / reissued	
AU2009225634 AA	20150122	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2009225634 AA	20151015	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2009225634 BB	20140925	LSGT	+	granted / extensions (spc, cpc, pte)	
AU2009225652 AA	20090924	LSPB	+	published / reissued	
AU2009225652 AA	20150115	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2009225652 AA	20151015	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2009225652 BB	20140828	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2718529 AA	20090924	LSPB	+	published / reissued	
CA2718529 AA	20100914	LSES	+EEER	EXAMINATION REQUEST	
CA2718529 AA	20101128	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20100914
CA2718529 AA	20160430	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20160318
CA2718529 C	20140617	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2718530 AA	20090924	LSPB	+	published / reissued	
CA2718530 AA	20100914	LSES	+EEER	EXAMINATION REQUEST	
CA2718530 AA	20101128	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20100914
CA2718530 AA	20160430	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20160318
CA2718530 C	20140722	LSGT	+	granted / extensions (spc, cpc, pte)	
CN101990524 A	20110323	LSPB	+	published / reissued	
CN101990524 A	20110323	LSPB	+C06	PUBLICATION	
CN101990524 A	20160127	LSRV	-C12	REJECTION OF A PATENT APPLICATION AFTER ITS PUBLICATION	
EP2257504 A2	20101208	LSPB	+	published / reissued	
EP2257504 A2	20101208	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100921
EP2257504 A2	20110330	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MOMENTIVE SPECIALTY CHEMICALS RESEARCH BELGIUM S.A
EP2257504 A2	20120711	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20120612
EP2257504 A2	20120711	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 16/00 20060101AFI20120604BHEP

EP2257504 A2	20120711	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C09K 3/00 20060101ALI20120604BHEP
EP2257504 A2	20150527	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : HEXION RESEARCH BELGIUM SA
EP2257504 A2	20151202	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 28/04 20060101AFI20151023BHEP
EP2257504 A2	20151209	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20151106
EP2257504 A2	20160817	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160317
EP2260010 A2	20101215	LSPB	+	published / reissued	
EP2260010 A2	20101215	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20100921
EP2260010 A2	20110316	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : HEXION SPECIALTY CHEMICALS, INC.
EP2260010 A2	20110323	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : MOMENTIVE SPECIALTY CHEMICALS RESEARCH BELGIUM
EP2260010 A2	20120711	LSES	+A4	DESPATCH OF SUPPLEMENTARY SEARCH REPORT	EFFECTIVE DATE : 20120612
EP2260010 A2	20120711	LSRE	RIC1	CLASSIFICATION (CORRECTION)	IPC : C04B 16/00 20060101AFI20120604BHEP
EP2260010 A2	20150527	LSAS	RAP1	TRANSFER OF RIGHTS OF AN EP PUBLISHED APPLICATION	OWNER NAME : HEXION RESEARCH BELGIUM SA
EP2260010 A2	20151223	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20151123
EP2260010 A2	20161005	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20160405
IN05791CN2010 A	20110415	LSPB	+	published / reissued	
MX2010010055 A1	20100930	LSPB	+	published / reissued	
MX2010010055 A1	20140305	LSGT	+FG	GRANT OR REGISTRATION	
MX2010010055 A1	20140408	LSAS	HC	CHANGE OF COMPANY NAME OR JURIDICAL STATUS	
MX2010010055 A1	20140408	LSAS	HC	CHANGE OF COMPANY NAME OR JURIDICAL STATUS	OWNER NAME : SIGNODE INTERNATIONAL IP HOLDINGS LLC
MX2010010058 A1	20100930	LSPB	+	published / reissued	
MX2010010058 A1	20120828	LSGT	+FG	GRANT OR REGISTRATION	
RU2010142636 A	20120427	LSPB	+	published / reissued	
RU2492152 C2	20130910	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2492152 C2	20151110	LSLE	-MM4A	THE PATENT IS INVALID DUE TO NON-PAYMENT OF FEES	EFFECTIVE DATE : 20150319
US2009235844 AA	20090924	LSPB	+	published / reissued	
US2009235845 AA	20090924	LSPB	+	published / reissued	
US2012210910 AA	20120823	LSPB	+	published / reissued	
US2012210910 AA	20120424	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOMENTIVE SPECIALTY CHEMICALS INC., OHIO

					OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:WANTLING, STEVEN J.; REEL/FRAME:028094/0070 EFFECTIVE DATE : 20120423
US2012210910 AA	20120725	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : JPMORGAN CHASE BANK, N.A., TEXAS OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:028640/0062 EFFECTIVE DATE : 20120620
US2012210910 AA	20120817	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST, NATIONAL ASSOCIATION, MINNESOTA OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:028802/0001 EFFECTIVE DATE : 20120630
US2012210910 AA	20120820	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST COMPANY, AS COLLATERAL AGENT, DEL OLDPARTY : SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:028810/0165 EFFECTIVE DATE : 20120630
US2012210910 AA	20130328	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOMENTIVE SPECIALTY CHEMICALS INC. (F/K/A HEXION S OLDPARTY : TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENT RIGHTS; ASSIGNOR:JPMORGAN CHASE BANK, N.A.; REEL/FRAME:030111/0021 EFFECTIVE DATE : 20130328
US2012210910 AA	20130403	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST, NATIONAL ASSOCIATION, MINNESOTA OLDPARTY : PATENT SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:030146/0946 EFFECTIVE DATE : 20130328
US2012210910 AA	20130403	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : JPMORGAN CHASE BANK, N.A., DELAWARE OLDPARTY : PATENT SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:030146/0970 EFFECTIVE DATE : 20130328
US2012210910 AA	20150218	LSWD	-ABD2	Abandoned -- Failure to Pay Issue Fee	
US2012210910 AA	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION INC. (FORMERLY KNOWN AS MOMENTIVE SPECIALTY OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION; REEL/FRAME:041793/0286 EFFECTIVE DATE : 20170208
US8202363 BB	20120619	LSGT	+	granted / extensions (spc, cpc, pte)	
US8202363 BB	20090319	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION SPECIALTY CHEMICALS, INC., OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:WANTLING, STEVEN J.; REEL/FRAME:022419/0371 EFFECTIVE DATE : 20090318
US8202363 BB	20100129	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST FSB, AS COLLATERAL AGENT,MINNESOT OLDPARTY : SECURITY INTEREST; ASSIGNORS:HEXION SPECIALTY CHEMICALS, INC.; BORDEN CHEMICAL FOUNDRY, LLC; BORDEN CHEMICAL INVESTMENTS, INC.; AND OTHERS; REEL/FRAME:023963/0038

					EFFECTIVE DATE : 20100129
US8202363 BB	20100129	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST FSB, AS COLLATERAL AGENT, MINNESO OLDPARTY : SECURITY INTEREST; ASSIGNORS:HEXION SPECIALTY CHEMICALS, INC.; BORDEN CHEMICAL FOUNDRY, LLC; BORDEN CHEMICAL INVESTMENTS, INC.; AND OTHERS; REEL/FRAME:023963/0038 EFFECTIVE DATE : 20100129
US8202363 BB	20100205	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : JPMORGAN CHASE BANK, N.A., AS ADMINISTRATIVE AGENT OLDPARTY : SECURITY AGREEMENT; ASSIGNORS:HEXION LLC; HEXION SPECIALTY CHEMICALS, INC.; BORDEN CHEMICAL FOUNDRY, LLC; AND OTHERS; REEL/FRAME:023905/0451 EFFECTIVE DATE : 20100129
US8202363 BB	20110415	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOMENTIVE SPECIALTY CHEMICALS INC., OHIO OLDPARTY : CHANGE OF NAME; ASSIGNOR:HEXION SPECIALTY CHEMICALS, INC.; REEL/FRAME:026138/0817 EFFECTIVE DATE : 20101001
US8202363 BB	20120530	LSGT	PAT1	Patented Case	
US8202363 BB	20130328	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOMENTIVE SPECIALTY CHEMICALS INC. (F/K/A HEXION S OLDPARTY : TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENT RIGHTS; ASSIGNOR:JPMORGAN CHASE BANK, N.A.; REEL/FRAME:030111/0021 EFFECTIVE DATE : 20130328
US8202363 BB	20130403	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : JPMORGAN CHASE BANK, N.A., DELAWARE OLDPARTY : PATENT SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:030146/0970 EFFECTIVE DATE : 20130328
US8202363 BB	20130403	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST, NATIONAL ASSOCIATION, MINNESOTA OLDPARTY : PATENT SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:030146/0946 EFFECTIVE DATE : 20130328
US8202363 BB	20160619	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8202363 BB	20160809	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160619
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : OILFIELD TECHNOLOGY GROUP, INC., OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BORDEN CHEMICAL FOUNDRY, LLC, OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER

					OWNER : LAWTER INTERNATIONAL INC., OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HSC CAPITAL CORPORATION, OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION INVESTMENTS INC. (FORMERLY KNOWN AS BORDEN OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION CI HOLDING COMPANY (CHINA) LLC, DISTRICT OF OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION INTERNATIONAL INC. (FORMERLY KNOWN AS BORDE OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION INC. (FORMERLY KNOWN AS HEXION SPECIALTY CH OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8202363 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION U.S. FINANCE CORP., OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20120828	LSGT	+	granted / extensions (spc, cpc, pte)	
US8252106 BB	20090319	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION SPECIALTY CHEMICALS, INC., OHIO OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:WANTLING, STEVEN J.; REEL/FRAME:022419/0381 EFFECTIVE DATE : 20090318
US8252106 BB	20100129	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST FSB,

					AS COLLATERAL AGENT,MINNESOTA OLDPARTY : SECURITY INTEREST; ASSIGNORS:HEXION SPECIALTY CHEMICALS, INC.; BORDEN CHEMICAL FOUNDRY, LLC; BORDEN CHEMICAL INVESTMENTS, INC.; AND OTHERS; REEL/FRAME:023963/0038 EFFECTIVE DATE : 20100129
US8252106 BB	20100129	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST FSB, AS COLLATERAL AGENT, MINNESOTA OLDPARTY : SECURITY INTEREST; ASSIGNORS:HEXION SPECIALTY CHEMICALS, INC.; BORDEN CHEMICAL FOUNDRY, LLC; BORDEN CHEMICAL INVESTMENTS, INC.; AND OTHERS; REEL/FRAME:023963/0038 EFFECTIVE DATE : 20100129
US8252106 BB	20100205	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : JPMORGAN CHASE BANK, N.A., AS ADMINISTRATIVE AGENT OLDPARTY : SECURITY AGREEMENT; ASSIGNORS:HEXION LLC; HEXION SPECIALTY CHEMICALS, INC.; BORDEN CHEMICAL FOUNDRY, LLC; AND OTHERS; REEL/FRAME:023905/0451 EFFECTIVE DATE : 20100129
US8252106 BB	20110415	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOMENTIVE SPECIALTY CHEMICALS INC., OHIO OLDPARTY : CHANGE OF NAME; ASSIGNOR:HEXION SPECIALTY CHEMICALS, INC.; REEL/FRAME:026138/0817 EFFECTIVE DATE : 20101001
US8252106 BB	20120808	LSGT	PAT1	Patented Case	
US8252106 BB	20130328	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : MOMENTIVE SPECIALTY CHEMICALS INC. (F/K/A HEXION S OLDPARTY : TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENT RIGHTS; ASSIGNOR:JPMORGAN CHASE BANK, N.A.; REEL/FRAME:030111/0021 EFFECTIVE DATE : 20130328
US8252106 BB	20130403	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : WILMINGTON TRUST, NATIONAL ASSOCIATION, MINNESOTA OLDPARTY : PATENT SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:030146/0946 EFFECTIVE DATE : 20130328
US8252106 BB	20130403	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : JPMORGAN CHASE BANK, N.A., DELAWARE OLDPARTY : PATENT SECURITY AGREEMENT; ASSIGNOR:MOMENTIVE SPECIALTY CHEMICALS INC.; REEL/FRAME:030146/0970 EFFECTIVE DATE : 20130328
US8252106 BB	20160828	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US8252106 BB	20161018	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20160828
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : LAWTER INTERNATIONAL INC., OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION INVESTMENTS INC. (FORMERLY KNOWN AS BORDEN OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO

					WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION INC. (FORMERLY KNOWN AS HEXION SPECIALTY CH OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION INTERNATIONAL INC. (FORMERLY KNOWN AS BORDE OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : OILFIELD TECHNOLOGY GROUP, INC., OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION CI HOLDING COMPANY (CHINA) LLC, DISTRICT OF OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HSC CAPITAL CORPORATION, OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : HEXION U.S. FINANCE CORP., OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
US8252106 BB	20170223	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BORDEN CHEMICAL FOUNDRY, LLC, OHIO OLDPARTY : RELEASE BY SECURED PARTY; ASSIGNOR:WILMINGTON TRUST, NATIONAL ASSOCIATION (SUCCESSOR BY MERGER TO WILMINGTON TRUST FSB), AS COLLATERAL AGENT; REEL/FRAME:041793/0001 EFFECTIVE DATE : 20170208
WO09117502 A2	20090924	LSPB	+	published / reissued	
WO09117502 A2	20100914	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2718529 COUNTRY OF REF DOCUMENT : CA
WO09117502 A2	20100917	LSNP	+WWE	WIPO	REF DOCUMENT NUMBER :

				INFORMATION: ENTRY INTO NATIONAL PHASE	2009225634 COUNTRY OF REF DOCUMENT : AU
WO09117502 A2	20100921	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09117502 A2	20101007	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009225634 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090318 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO09117502 A2	20101019	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2010142636 COUNTRY OF REF DOCUMENT : RU
WO09117520 A2	20090924	LSPB	+	published / reissued	
WO09117520 A2	20100914	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2718530 COUNTRY OF REF DOCUMENT : CA
WO09117520 A2	20100917	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2009225652 COUNTRY OF REF DOCUMENT : AU
WO09117520 A2	20100921	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE
WO09117520 A2	20101007	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009225652 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20090318 KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :

Title: PROCESS AND ADDITIVE TO IMPROVE ADHESION OF BUILDING COMPOSITIONS TO SUBSTRATES

Abstract: Source: US2012328788A The present invention relates to the use of an additive as well as a process to improve the adhesion of a mortar to a building substrate, wherein the mortar is mixed with said additive and is applied to a building substrate selected from the group of polystyrene-containing substrates, polyolefin-containing substrates or polyvinyl chloride-containing substrates, the additive containing (i) a plasticizer that is liquid at 50 degrees centigrade or lower, has a boiling point of 100 degrees centigrade or higher, and that has a solubility parameter delta 25 degrees centigrade between 22.5 MPa¹/2 and MPa¹/2; (ii) optionally, a filler that has a BET surface area of at least 40 m²/g; (iii) optionally, a biopolymer, (iv) optionally, a protective colloid; and (v) optionally, a water-insoluble film-forming (co)polymer based on ethylenically unsaturated monomers. The invention also covers an additive and a kit of parts suitable for use in the above process.

Classifications:

International (ipc 8-9): B05D7/02 C04B16/00 C04B16/02 C04B20/10 C04B24/00 C04B24/24 C04B24/26 C04B24/38 C04B28/04 C04B40/00 C07C69/24 C07C69/80 C08J3/22 C08K5/101 C08K5/12 C08L1/26 C08L29/04 C08L31/04 C09D7/00 E04F15/00 (Advanced/Invention);

C04B40/00 C09D7/00 (Core/Invention);

C04B20/10 C04B24/00 C04B28/04 C04B40/00 (Core/Non-invention)

CPC: Y02W30/94 C04B40/0042 C04B20/1022 C04B28/04 C04B40/0039 C04B2111/00637 C04B2111/00672 C09D5/34 C04B16/02 B05D7/02 E04F15/00

European: C04B20/10B2 C04B28/04 C04B40/00D4 C04B40/00D4B C09D5/34 M04B111/00T10B M04B111/00T8

US: 106/823 427/207.1 427/393.5 524/296 524/297 524/315 524/42 554/1 560/76

Family:

Publication number	Publication date	Application number	Application date
CA2784095 AA	20110623	CA20102784095	20101215
CA2784095 C	20170307	CA20102784095	20101215
CN102781869 A	20121114	CN201080055993	20101215
CN102781869 B	20150805	CN201080055993	20101215
CN104150808 A	20141119	CN201410333578	20101215
EA201290489 A1	20130130	EA20120090489	20101215
EP2513008 A2	20121024	EP20100796357	20101215
KR20120094069 A	20120823	KR20127016605	20101215
TW201136861 A	20111101	TW20100144610	20101217
UA112960 C2	20161125	UA20120008563	20101215
US2012328788 AA	20121227	US20100515347	20101215
US2016200631 AA	20160714	US20160080083	20160324
WO11073224 A2	20110623	WO2010EP69690	20101215
WO11073224 A3	20110811	WO2010EP69690	20101215

Priority:

EP20090180024 20091218

EP20100796357 20101215

US20100292283P 20100105

US20100515347 20101215

US20120515347 20120612

US20160080083 20160324

WO2010EP69690 20101215

Probable Assignee: AKZO NOBEL CHEMICALS INT BV

Assignee(s): (std): HEINI URS ; KOELLIKER ROBERT ; PUSTOVGAR ANDREY PETROVICH ; WILLIMANN HONGLI ; WICKI HANS ; ABERLE THOMAS ; AKZO NOBEL CHEMICALS INT BV

Assignee(s): AKZO NOBEL CHEMICALS INTERNATIONAL B V

Inventor(s): (std): ABERLE THOMAS ; HANS WICKI ; HEINI URS ; HONGLI WILLIMANN ; KOELLIKER ROBERT ; PETROVICH PUSTOVGAR ANDREY ; PUSTOVGAR ANDREI P ; PUSTOVGAR ANDREY PETROVICH ; ROBERT KOELLIKER ; THOMAS ABERLE ; URS HEINI ; WICKI HANS ; WILLIMANN HONGLI

Agent(s): NORTON ROSE CANADA SENCRL SRL LLP; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; DE VRIES ADRIAAN JACOBUS; ALFERINK PETRUS JOHANNES THEODORUS C S

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CA2784095 AA	20110623	LSPB	+	published / reissued	
CA2784095 AA	20120613	LSES	+EEER	EXAMINATION REQUEST	
CA2784095 AA	20120812	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20120613
CA2784095 C	20170307	LSGT	+	granted / extensions (spc, cpc, pte)	
CN102781869 A	20121114	LSPB	+	published / reissued	
CN102781869 A	20121114	LSPB	+C06	PUBLICATION	
CN102781869 A	20150805	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN102781869 B	20150805	LSGT	+	granted /	

				extensions (spc, cpc, pte)		
CN104150808 A	20141119	LSPB	+	published / reissued		
CN104150808 A	20141119	LSPB	+C06	PUBLICATION		
EA201290489 A1	20130130	LSPB	+	published / reissued		
EP2513008 A2	20121024	LSPB	+	published / reissued		
EP2513008 A2	20121024	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20120510	
EP2513008 A2	20160120	LSAS	RAP3	CORRECTION OF THE ADDRESS OR NAME OF APPLICANT (A DOCUMENT)	OWNER NAME : AKZO NOBEL CHEMICALS INTERNATIONAL B.V.	
EP2513008 A2	20160810	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20160712	
KR20120094069 A	20120823	LSPB	+	published / reissued		
KR20120094069 A	20160116	LSDW	-WITN	WITHDRAWAL DUE TO NO REQUEST FOR EXAMINATION		
TW201136861 A	20111101	LSPB	+	published / reissued		
UA112960 C2	20161125	LSGT	+	granted / extensions (spc, cpc, pte)		
US2012328788 AA	20121227	LSPB	+	published / reissued		
US2012328788 AA	20120620	LSAS	AS	ASSIGNMENT	OWNER NAME : AKZO NOBEL CHEMICALS INTERNATIONAL B.V., NETHERLAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:WILLIMANN, HONGLI; KOELLIKER, ROBERT; PUSTOVGAR, ANDREY PETROVICH; AND OTHERS; SIGNING DATES FROM 20120504 TO 20120522; REEL/FRA:028411/0747	
US2016200631 AA	20160714	LSPB	+	published / reissued		
WO11073224 A2	20110623	LSPB	+	published / reissued		
WO11073224 A3	20120612	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2784095 COUNTRY OF REF DOCUMENT : CA	
WO11073224 A3	20120612	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 13515347 COUNTRY OF REF DOCUMENT : US	
WO11073224 A3	20120618	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE	
WO11073224 A3	20120626	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20127016605 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A	
WO11073224 A3	20120710	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : A201208563 COUNTRY OF REF DOCUMENT : UA	

Title: System and method for dispersing pigment in cement based compositions

Abstract: Source: US5558708A A system and method for dispersing pigment in cement based compositions comprising a predetermined and prepackaged amount of a cement based component and a predetermined and prepackaged amount of an aqueous dispersion of a pigment containing component.

Classifications:

International (IPC 8-9): B28C7/12 C04B14/00 C04B14/36

C04B22/08 C04B22/12 C04B24/16 C04B24/26 C04B28/02

C04B28/04 C04B40/00 C04B40/06 C08L21/02 C09C3/00

C09D1/00 (Advanced/Invention);

C09C3/00 (Advanced/Non-invention);

B28C7/00 C04B14/00 C04B28/00 C04B40/00 (Core/Invention)

International (IPC 1-7): C04B C04B103/54 C04B14/00 C04B14/10

C04B14/30 C04B14/36 C04B16/00 C04B16/04 C04B22/08

C04B22/12 C04B24/16 C04B24/26 C04B28/02 C04B40/00

C04B40/06 C08L21/02 C09B69/00 C09C3/00 C09D1/00

CPC: C04B28/04 B28C7/12 C04B40/0028 C04B40/0039 C04B40/065

European: B28C7/12 C04B28/04 C04B40/00D C04B40/00D4

C04B40/06D2

US: 106/401 106/499 106/501.1 106/694 106/696 106/708 106/709

106/711 106/712 106/724 106/725 106/726 106/729 106/730

106/737 106/738 106/790 106/802 106/803 106/804 106/805

106/809 106/819 106/823 523/171

END

Family:

Publication number	Publication date	Application number	Application date
AU199650655 A1	19961121	AU19960050655	19960415
AU691739 B2	19980521	AU19960050655	19960415
BRPI9602230 A	19980407	BR1996PI02230	19960510
CA2176098 AA	19961112	CA19962176098	19960508
CA2176098 C	20020205	CA19962176098	19960508
CA2298951 AA	19961112	CA19962298951	19960508
CA2298951 C	20010814	CA19962298951	19960508
CA2298955 AA	19961112	CA19962298955	19960508
CA2298955 C	20010814	CA19962298955	19960508
EP0742186 A1	19961113	EP19960107523	19960510
ID30202 A	19961114	ID20010000711D	19960510
JP9124970 A2	19970513	JP19960141105	19960510
MXPA96001684 A1	20020514	MX19960001684	19960506
MY132071 A	20070928	MY19960001472	19960418
NZ286547 A	19971124	NZ19960286547	19960509
SG42398 A1	19970815	SG19960009710	19960504
TH22971 A	19970114	TH19961001467	19960509
US5558708 A	19960924	US19950438781	19950511
US5846315 A	19981208	US19970908449	19970807
US5855665 A	19990105	US19970908450	19970807
US5951752 A	19990914	US19980092554	19980605
ZA9603682 A	19971110	ZA19960003682	19960509

Priority:

CA19962176098 19960508	CA19962298951 19960508	US19970908449 19970807
US19960625894 19960401	US19950438781 19950511	CA19962298955 19960508
US19980092554 19980605	US19970908450 19970807	

Probable Assignee: CUSTOM BUILDING PRODUCTS INC

Assignee(s): (std): CURE CORP C ; KIYUA CORP C

Assignee(s): ZOUMUT HANI ; JOHANSEN CHARLES J JR ; VECCHIO ROBERT L ; JOHANSEN CHARLES J ; BANK OF AMERICA NA ; BANK OF AMERICA NA ADMINISTRATIVE AGENT AS ; BANK OF AMERICA NA AS COLLATERAL AGENT ; BANK OF AMERICA NA COLLATERAL AGENT AS ; C CURE CORP ; CUSTOM BUILDING PRODUCTS INC ; C KIYUA CORP ; CUSTOM BUILDING PRODUCTS INC F K A CUSTOM BUILDING ; HOLLAS ERNEST D ; CUSTOM BUILDING PRODUCTS INC (F K A CUSTOM BUILDING PRODUCTS) ; CUSTOM BUILDING PRODUCTS INC F K A CUSTOM BUILDING PRODUCTS

Inventor(s): (std): CHIYAARUZU JIEI JIYOANSEN JIYU ; AANESUTO DEI HOORASU ; CHARLES J JOHANSEN JR ; HANI ZOUMATSUTO ; HOLLAS ERNEST D ; HOLLAS ERNST D ; JOHANSEN CHARLES J ; JOHANSEN CHARLES J JR ; JOHANSEN JR CHARLES J ; JPOHANSEN CHARLES J JR ; ROBAATO ERU BETSUCHIO ; VECCHIO ROBERT ; VECCHIO ROBERT L ; ZOUMUT HANI

Inventor(s): ROBERT L VECCHIO ; JR CHARLES J JOHANSEN ; JOHANSEN CHARLES JJR ; HANI ZOUMUT ; CHARLES J JPOHANSEN JR ; CHIYAARUZU JIEI JIYOANSEN JIYUNIA ; ERNEST D HOLLAS ; ERNST D HOLLAS

Agent(s): PHILLIPS ORMONDE FITZPATRICK; MOFFAT AND CO

Designated states: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

Legal status (INPADOC)
[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
AU199650655 A1	19961121	LSPB	+	published / reissued	
AU691739 B2	19980521	LSGT	+	granted / extensions (spc, cpc, pte)	
AU691739 B2	20031113	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
BRPI9602230 A	19980407	LSPB	+	published / reissued	
BRPI9602230 A	20040210	LSRV	-FA8	DISMISSAL: DISMISSAL - ARTICLE 36, PAR. 1 OF INDUSTRIAL PROPERTY LAW	
CA2176098 AA	19961112	LSPB	+	published / reissued	
CA2176098 AA	19991209	LSES	+EEER	EXAMINATION REQUEST	
CA2176098 AA	20160711	LSLE	-MKEX	EXPIRY	EFFECTIVE DATE : 20160509
CA2176098 C	20020205	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2298951 AA	19961112	LSPB	+	published / reissued	
CA2298951 AA	20000303	LSES	+EEER	EXAMINATION REQUEST	
CA2298951 AA	20160711	LSLE	-MKEX	EXPIRY	EFFECTIVE DATE : 20160509
CA2298951 C	20010814	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2298955 AA	19961112	LSPB	+	published / reissued	
CA2298955 AA	20000303	LSES	+EEER	EXAMINATION REQUEST	
CA2298955 AA	20160711	LSLE	-MKEX	EXPIRY	EFFECTIVE DATE : 20160509
CA2298955 C	20010814	LSGT	+	granted / extensions (spc, cpc, pte)	
EP0742186 A1	19961113	LSPB	+	published / reissued	
EP0742186 A1	19970709	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19970503
EP0742186 A1	19990310	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19990126
EP0742186 A1	20030611	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20021203
ID30202 A	19961114	LSPB	+	published / reissued	
JP9124970 A2	19970513	LSPB	+	published / reissued	
MXPA96001684 A1	20020514	LSPB	+	published / reissued	
MY132071 A	20070928	LSGT	+	granted / extensions (spc, cpc, pte)	
NZ286547 A	19971124	LSPB	+	published / reissued	
SG42398 A1	19970815	LSPB	+	published / reissued	
TH22971 A	19970114	LSPB	+	published / reissued	

US5558708 A	19960924	LSGT	+	granted / extensions (spc, cpc, pte)	
US5558708 A	19950511	LSAS	AS	ASSIGNMENT	OWNER NAME : C-CURE CORPORATION, TEXAS DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:JOHANSEN, CHARLES J.; HOLLAS, ERNEST D.; VECCHIO, ROBERT L.; AND OTHERS; REEL/FRAME:007528/0241 EFFECTIVE DATE : 19950502
US5558708 A	20000317	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5558708 A	20040324	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5558708 A	20050518	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A. AS COLLATERAL AGENT, NORTH C DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016026/0633 EFFECTIVE DATE : 20050429
US5558708 A	20050523	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A. AS COLLATERAL AGENT, NORTH C DESCRIPTION : SECOND LIEN PATENT SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016050/0298 EFFECTIVE DATE : 20050429
US5558708 A	20050829	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC., CALIFORNIA DESCRIPTION : MERGER; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016914/0577 EFFECTIVE DATE : 20050615
US5558708 A	20080826	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5558708 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC. (F/K/A CUSTOM BUILD DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGEENT; REEL/FRAME:024103/0987 EFFECTIVE DATE : 20100319
US5558708 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC. (F/K/A CUSTOM BUILD DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGENT; REEL/FRAME:024114/0010 EFFECTIVE DATE : 20100319
US5558708 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT,NOR DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS, INC.; REEL/FRAME:024114/0780 EFFECTIVE DATE : 20100319
US5558708 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT, NO DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS, INC.; REEL/FRAME:024114/0780 EFFECTIVE DATE : 20100319
US5558708 A	20130926	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC., CALIFORNIA DESCRIPTION : TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENTS; ASSIGNOR:BANK OF AMERICA, N.A.; REEL/FRAME:031298/0759 EFFECTIVE DATE : 20130926
US5846315 A	19981208	LSGT	+	granted / extensions (spc, cpc, pte)	
US5846315 A	20020731	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

US5846315 A	20050518	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A. AS COLLATERAL AGENT, NORTH C DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016026/0633 EFFECTIVE DATE : 20050429
US5846315 A	20050523	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A. AS COLLATERAL AGENT, NORTH C DESCRIPTION : SECOND LIEN PATENT SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016050/0298 EFFECTIVE DATE : 20050429
US5846315 A	20050829	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC., CALIFORNIA DESCRIPTION : MERGER; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016914/0577 EFFECTIVE DATE : 20050615
US5846315 A	20060608	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5846315 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC. (F/K/A CUSTOM BUILD DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGEENT; REEL/FRAME:024103/0987 EFFECTIVE DATE : 20100319
US5846315 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC. (F/K/A CUSTOM BUILD DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGENT; REEL/FRAME:024114/0010 EFFECTIVE DATE : 20100319
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US5846315 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT,NOR DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS, INC.; REEL/FRAME:024114/0780 EFFECTIVE DATE : 20100319
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US5855665 A	19990105	LSGT	+	granted / extensions (spc, cpc, pte)	
US5855665 A	20020731	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5855665 A	20050518	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A. AS COLLATERAL AGENT, NORTH C DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016026/0633 EFFECTIVE DATE : 20050429
US5855665 A	20050523	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A. AS COLLATERAL AGENT, NORTH C DESCRIPTION : SECOND LIEN PATENT SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING

					PRODUCTS; REEL/FRAME:016050/0298 EFFECTIVE DATE : 20050429
US5855665 A	20050829	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC., CALIFORNIA DESCRIPTION : MERGER; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016914/0577 EFFECTIVE DATE : 20050615
US5855665 A	20060705	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US5855665 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT, NO DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS, INC.; REEL/FRAME:024114/0780 EFFECTIVE DATE : 20100319
US5855665 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT,NOR DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS, INC.; REEL/FRAME:024114/0780 EFFECTIVE DATE : 20100319
US5855665 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC. (F/K/A CUSTOM BUILD DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGEENT; REEL/FRAME:024103/0987 EFFECTIVE DATE : 20100319
US5855665 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC. (F/K/A CUSTOM BUILD DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGENT; REEL/FRAME:024114/0010 EFFECTIVE DATE : 20100319
US5855665 A	20100706	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5855665 A	20130926	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC., CALIFORNIA DESCRIPTION : TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENTS; ASSIGNOR:BANK OF AMERICA, N.A.; REEL/FRAME:031298/0759 EFFECTIVE DATE : 20130926
US5951752 A	19990914	LSGT	+	granted / extensions (spc, cpc, pte)	
US5951752 A	20030313	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US5951752 A	20050518	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A. AS COLLATERAL AGENT, NORTH C DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016026/0633 EFFECTIVE DATE : 20050429
US5951752 A	20050523	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A. AS COLLATERAL AGENT, NORTH C DESCRIPTION : SECOND LIEN PATENT SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016050/0298 EFFECTIVE DATE : 20050429
US5951752 A	20050829	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC., CALIFORNIA DESCRIPTION : MERGER; ASSIGNOR:CUSTOM BUILDING PRODUCTS; REEL/FRAME:016914/0577 EFFECTIVE DATE : 20050615
US5951752 A	20070314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8

US5951752 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC. (F/K/A CUSTOM BUILD DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGEENT; REEL/FRAME:024103/0987 EFFECTIVE DATE : 20100319
US5951752 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC. (F/K/A CUSTOM BUILD DESCRIPTION : RELEASE BY SECURED PARTY; ASSIGNOR:BANK OF AMERICA, N.A., AS COLLATERAL AGENT; REEL/FRAME:024114/0010 EFFECTIVE DATE : 20100319
US5951752 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT, NO DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS, INC.; REEL/FRAME:024114/0780 EFFECTIVE DATE : 20100319
US5951752 A	20100322	LSAS	AS	ASSIGNMENT	OWNER NAME : BANK OF AMERICA, N.A., AS ADMINISTRATIVE AGENT,NOR DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:CUSTOM BUILDING PRODUCTS, INC.; REEL/FRAME:024114/0780 EFFECTIVE DATE : 20100319
US5951752 A	20110314	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12
US5951752 A	20130926	LSAS	AS	ASSIGNMENT	OWNER NAME : CUSTOM BUILDING PRODUCTS, INC., CALIFORNIA DESCRIPTION : TERMINATION AND RELEASE OF SECURITY INTEREST IN PATENTS; ASSIGNOR:BANK OF AMERICA, N.A.; REEL/FRAME:031298/0759 EFFECTIVE DATE : 20130926
ZA9603682 A	19971110	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: ENHANCED CEMENT MIXED WITH SELECTED AGGREGATES

Abstract: Source: US5378279A PCT No. PCT/FR91/00663 Sec. 371 Date Feb. 8, 1993 Sec. 102(e) Date Feb. 8, 1993 PCT Filed Aug. 12, 1991 PCT Pub. No. WO92/02469 PCT Pub. Date Feb. 20, 1992. A cement enhanced to obtain a self-smoothing, self-levelling, non-shrinking mortar or concrete, consisting of an artificial cement mixed with additives, including at least a combination of a plasticizing agent included in a proportion of between 0.5 and 4 percent of the weight of the artificial cement and an expanding agent included in a proportion of between 0.00001 and 0.00099 percent of the weight of the artificial cement, and mortar or concrete obtained with the enhanced binder, mixed with a filler consisting of aggregates with a selected particle size.

Classifications:

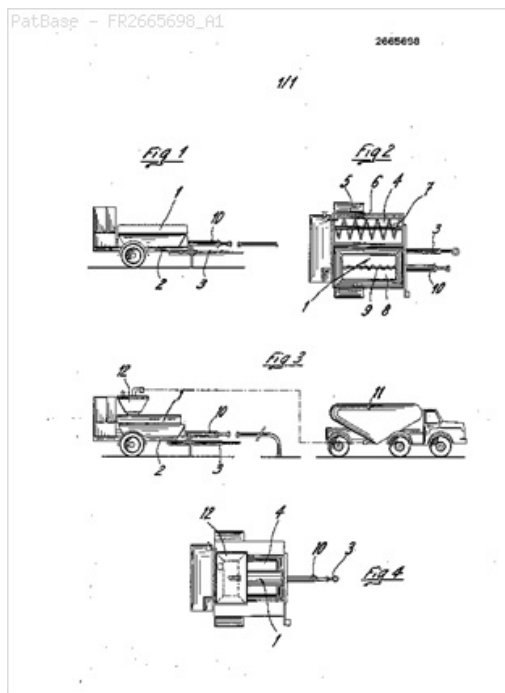
International (IPC 8-9): C04B14/04 C04B20/00 C04B24/12 C04B24/18 C04B28/02 C04B28/04 C04B38/02 C04B40/00 E04F15/12 (Advanced/Invention); C04B20/00 C04B28/00 C04B40/00 E04F15/12 (Core/Invention)

International (IPC 1-7): C04B14/04 C04B22/14 C04B24/00 C04B24/12 C04B24/18 C04B24/28 C04B28/02 C04B28/04 C04B38/02 C04B40/00 C04B7/42 E04F15/12

CPC: Y10S106/01 C04B40/0039 C04B20/0076 C04B28/04 C04B2111/34 C04B2111/62 Y02W30/92

European: C04B20/00H C04B28/04 C04B40/00D4 M04B111/34 M04B111/62

US: 106/719 106/720 106/724 106/728 106/729 106/823 106/DIG.1



Family:

Publication number	Publication date	Application number	Application date
AT109759 E	19940815	AT19910915676T	19910812
CA2089067 AA	19930208	CA19912089067	19910812
DE69103423 D1	19940915	DE19916003423	19910812
EP0542888 A1	19930526	EP19910915676	19910812
EP0542888 B1	19940810	EP19910915676	19910812
FR2665698 A1	19920214	FR19900010267	19900810
FR2665698 B1	19930910	FR19900010267	19900810
JP6500525 T2	19940120	JP19910513945T	19910812
US5378279 A	19950103	US19930965296	19930208
WO9202469 A1	19920220	WO1991FR00663	19910812

Priority:

FR19900010267 19900810 WO1991FR00663 19910812

Probable Assignee: CONROY MICHEL

Assignee(s): (std): CONROY MICHEL

Assignee(s): CONROY MICHEL DOLE FR

Inventor(s): (std): CONROY MICHEL ; MICHEL CONROY

Inventor(s): CONROY MICHEL DOLE FR

Agent(s): GOUDREAU GAGE DUBUC

Designated states: AT BE CA CH DE DK ES FR GB GR IT JP LI LU NL SE US

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
AT109759 E	19940815	LSGT	+	granted / extensions (spc, cpc, pte)	
AT109759 E	19950215	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
CA2089067 AA	19930208	LSPB	+	published / reissued	
CA2089067 AA	19930208	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2089067 AA	19970812	LSLE	-FZDE	DEAD	

DE69103423 D1	19950209	LSWD	-8332	NO LEGAL EFFECT FOR DE	
EP0542888 A1	19930526	LSPB	+	published / reissued	
EP0542888 A1	19930526	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 19920909
EP0542888 A1	19931201	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 19931015
EP0542888 A1	19940406	LSAS	RAP3	CORRECTION OF THE ADDRESS OR NAME OF APPLICANT (A DOCUMENT)	OWNER NAME : CONROY, MICHEL
EP0542888 A1	19940810	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GR DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 19940810
EP0542888 A1	19940810	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : NL EFFECTIVE DATE : 19940810
EP0542888 A1	19940810	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : ES DESCRIPTION : THE PATENT HAS BEEN ANNULLED BY A DECISION OF A NATIONAL AUTHORITY EFFECTIVE DATE : 19940810
EP0542888 A1	19940810	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : GB EFFECTIVE DATE : 19940810
EP0542888 A1	19940810	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : AT EFFECTIVE DATE : 19940810
EP0542888 A1	19940810	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DK EFFECTIVE DATE : 19940810
EP0542888 A1	19940831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LU DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 19940831
EP0542888 A1	19940831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : LI EFFECTIVE DATE : 19940831
EP0542888 A1	19940831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : CH EFFECTIVE DATE : 19940831
EP0542888 A1	19940831	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : BE EFFECTIVE DATE : 19940831
EP0542888 A1	19940928	LSFE	+PGFP	POSTGRANT: ANNUAL FEES PAID TO NATIONAL OFFICE	REF COUNTRY CODE : FR PAYMENT DATE : 19940928 YEAR OF FEE PAYMENT : 04
EP0542888 A1	19941110	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : SE EFFECTIVE DATE : 19941110
EP0542888 A1	19941111	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : DE EFFECTIVE DATE : 19941111

EP0542888 A1	19950116	LSLE	-NLV1	NL: LAPSED OR ANNULLED DUE TO FAILURE TO FULFILL THE REQUIREMENTS OF ART. 29P AND 29M OF THE PATENTS ACT	
EP0542888 A1	19950215	LSWD	-GBV	GB: EP PATENT (UK) TREATED AS ALWAYS HAVING BEEN VOID IN ACCORDANCE WITH GB SECTION 77(7)/1977	EFFECTIVE DATE : 19940810
EP0542888 A1	19950228	LSLE	-BERE	BE: LAPSED	OWNER NAME : CONROY MICHEL EFFECTIVE DATE : 19940831
EP0542888 A1	19950428	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : PL
EP0542888 A1	19950802	LSGT	+26N	NO OPPOSITION FILED	
EP0542888 A1	19960430	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : FR EFFECTIVE DATE : 19960430
EP0542888 A1	19960614	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : FR REF LEGAL EVENT CODE : ST
EP0542888 A1	20080102	LSLE	-PG25	LAPSED IN A CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	REF COUNTRY CODE : IT DESCRIPTION : LAPSE BECAUSE OF FAILURE TO SUBMIT A TRANSLATION OF THE DESCRIPTION OR TO PAY THE FEE WITHIN THE PRESCRIBED TIME-LIMIT EFFECTIVE DATE : 19940810
EP0542888 B1	19940810	LSGT	+	granted / extensions (spc, cpc, pte)	
FR2665698 A1	19920214	LSPB	+	published / reissued	
FR2665698 A1	19960614	LSLE	-ST	NOTIFICATION OF LAPSE	
FR2665698 B1	19930910	LSGT	+	granted / extensions (spc, cpc, pte)	
JP6500525 T2	19940120	LSPB	+	published / reissued	
US5378279 A	19950103	LSGT	+	granted / extensions (spc, cpc, pte)	
US5378279 A	19951212	LSRE	CC	CERTIFICATE OF CORRECTION	
US5378279 A	19990103	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US5378279 A	19990316	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 19990103
WO9202469 A1	19920220	LSPB	+	published / reissued	
WO9202469 A1	19920909	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 1991915676 COUNTRY OF REF DOCUMENT : EP
WO9202469 A1	19930208	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : CA REF DOCUMENT NUMBER : 2089067 KIND CODE OF REF DOCUMENT : A FORMAT OF REF DOCUMENT (F/P) : F
WO9202469 A1	19930208	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2089067 COUNTRY OF REF DOCUMENT : CA
WO9202469 A1	19930526	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1991915676 COUNTRY OF REF DOCUMENT : EP
WO9202469 A1	19940810	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 1991915676 COUNTRY OF REF DOCUMENT : EP

Title: STABLE PCE AND POLYSACCHARIDE VMA COMPOSITIONS FOR CONCRETE ADMIXTURES AND THEIR USES

Abstract: Source: US2017107149A The present invention provides aqueous compositions that are stable after at least a 24 hour period comprising a polysaccharide viscosity modifying additive and more than 60 weight percent, based on the weight of total solids in the compositions of one or more polycarboxylate ether, the compositions comprising an acid chosen from an organic acid having 1 hydroxy group or less, a strong acid containing a single hydrogen, an ascorbic acid, and mixtures thereof, the compositions having a pH of less than the pH of the polycarboxylate ether itself, or from 1.0 to 6.0. The present invention enables stable concentrates of aqueous polycarboxylate ethers and polysaccharide viscosity modifying agents for use in hydraulic binder applications, the compositions having a total solids content of 10 weight percent to as high as 65 weight percent.

Classifications:

International (IPC 8-9): C04B103/00 C04B111/00 C04B24/26 C04B24/38 C04B28/04 C04B40/00 (Advanced/Invention); C04B103/00 C04B111/00 (Advanced/Non-invention)
CPC: C04B2103/0079 C04B2111/00112 C04B24/383 C04B24/2647 C04B2103/44 C04B2103/32 C04B28/04 C04B40/0039

Family:

Publication number	Publication date	Application number	Application date
CN106132898 A	20161116	CN201580014602	20150327
EP3122696 A1	20170201	EP20150719032	20150327
US2017107149 AA	20170420	US20150127982	20150327
WO15148946 A1	20151001	WO2015US23034	20150327

Priority:

US20140971715P 20140328 US20150127982 20150327 WO2015US23034 20150327

Probable Assignee: DOW CHEMICAL CO

Assignee(s): (std): DOW CHEMICAL CO ; DOW EUROPE GMBH ; DOW GLOBAL TECHNOLOGIES LLC ; DOW WOLFF CELLULOSICS GMBH AND CO OHG

Inventor(s): (std): BAUMANN ROBERT ; SCHMITZ MARC ; WAGNER ANETTE

Agent(s): HOUGHTON MARK PHILLIP; MERRIAM ANDREW E C

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN106132898 A	20161116	LSPB	+	published / reissued	
CN106132898 A	20161116	LSPB	+C06	PUBLICATION	
EP3122696 A1	20170201	LSPB	+	published / reissued	
EP3122696 A1	20170201	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20161013
US2017107149 AA	20170420	LSPB	+	published / reissued	
WO15148946 A1	20151001	LSPB	+	published / reissued	
WO15148946 A1	20160914	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016557323 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15148946 A1	20160921	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15127982 COUNTRY OF REF DOCUMENT : US
WO15148946 A1	20160928	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: ULTRA-FAST SETTING CEMENT BASED ON AMORPHOUS CALCIUM ALUMINATE

Abstract: Source: US2017088465A The present invention relates to an ultra-fast setting cement composition containing at least amorphous calcium aluminate including by weight, as compared to amorphous calcium aluminate total weight:

- (a) from 35 to 55 percent of calcium oxide CaO (C),
- (b) from 19 to 55 percent of alumina Al₂O₃ (A), the C/A molar ratio being higher than or equal to 1.5,
- (c) from 0 to 10 percent of silica SiO₂, with the amorphous calcium aluminate including (d) from 5 to 16 percent of iron oxide Fe₂O₃. Also disclosed is a method to produce the cement composition, as well as to uses thereof.

Classifications:

International (IPC 8-9): C04B103/12 C04B14/04 C04B14/06 C04B14/30 C04B20/10 C04B22/06 C04B24/04 C04B28/04 C04B28/06 C04B28/14 C04B28/16 C04B40/00 C04B7/32 C04B7/47 C04B7/52 (Advanced/Invention); C04B103/12 (Advanced/Non-invention)
CPC: C04B20/1022 C04B28/065 C04B14/06 C04B14/303 C04B14/308 C04B22/064 C04B7/32 C04B7/47 C04B7/52 C04B24/04 C04B14/04 C04B40/0085 C04B28/04 C04B28/06 C04B28/14 C04B2103/12

PatBase - US2017088465_AA

Fig.1

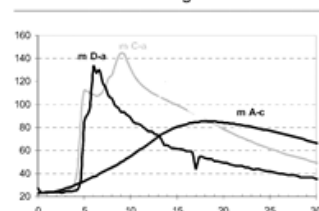


Fig.2

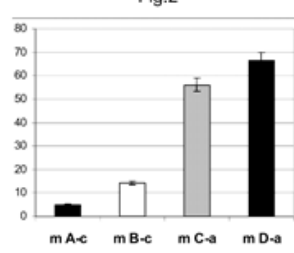
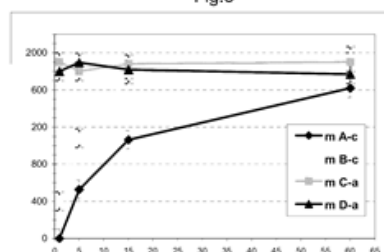


Fig.3



Family:

Publication number	Publication date	Application number	Application date
CN106470957 A	20170301	CN201580034338	20150513
EP3142985 A1	20170322	EP20150732768	20150513
FR3021047 A1	20151120	FR20140054425	20140516
KR20170007301 A	20170118	KR20167032015	20150513
US2017088465 AA	20170330	US20150311292	20150513
WO15173525 A1	20151119	WO2015FR51275	20150513

Priority:

FR20140054425 20140516 WO2015FR51275 20150513

Probable Assignee: KERNEOS

Assignee(s): (std): KERNEOS

Inventor(s): (std): TOUZO BRUNO

Inventor(s): BRUNO TOUZO

Agent(s): JACOBACCI CORALIS HARLE; CABINET HARLE ET PHELIP; ORSINI FABIENNE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN106470957 A	20170301	LSPB	+	published / reissued	

CN106470957 A	20170301	LSPB	PB01	PUBLICATION	
EP3142985 A1	20170322	LSPB	+	published / reissued	
EP3142985 A1	20170322	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20161116
FR3021047 A1	20151120	LSPB	+	published / reissued	
FR3021047 A1	20150320	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 2
FR3021047 A1	20151120	LSSES	PLSC	SEARCH REPORT READY	EFFECTIVE DATE : 20151120
FR3021047 A1	20160308	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 3
FR3021047 A1	20170303	LSFE	+PLFP	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
KR20170007301 A	20170118	LSPB	+	published / reissued	
US2017088465 AA	20170330	LSPB	+	published / reissued	
US2017088465 AA	20161115	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : KERNEOS, FRANCE OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNOR:TOUZO, BRUNO; REEL/FRA:040326/0904 EFFECTIVE DATE : 20161007
WO15173525 A1	20151119	LSPB	+	published / reissued	
WO15173525 A1	20161115	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2017512448 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15173525 A1	20161115	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 15311292 COUNTRY OF REF DOCUMENT : US
WO15173525 A1	20161116	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 20167032015 COUNTRY OF REF DOCUMENT : KR KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15173525 A1	20161116	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

Title: INORGANIC BINDER COMPOSITION COMPRISING A COPOLYMER

Abstract: Source: US2017129812A The present invention relates to a composition comprising (a) at least one inorganic binder and (beta) at least one water-soluble copolymer based on (a) 0.1 to 20 wt percent of at least one monomer of the formula (I) and (b) 25 to 99.9 wt percent of at least one hydrophilic monomer (b) which is different from monomer (a), where the at least one copolymer has a molar mass average M of 1 500 000 to 30 000 000 g/mol. Furthermore, a process for producing this composition is disclosed. A further aspect of the present invention is the use of the copolymer of component (beta) as rheological additive in a composition of the invention.

Classifications:

International (IPC 8-9): C04B111/62 C04B111/72 C04B24/16 C04B24/26 C04B24/32 C04B28/02 C04B28/04 C04B28/06 C04B28/16 C04B40/00 C08F220/58 (Advanced/Invention); C04B111/62 C04B111/72 (Advanced/Non-invention)

CPC: C04B24/165 C04B24/246 C04B24/2647 C04B24/267 C04B28/02 C04B28/04 C04B28/06 C04B28/065 C04B2103/0082 C04B2103/0083 C04B2111/00517 C04B2111/00637 C04B2111/00646 C04B2111/00672 C04B2111/72 C04B24/2652 C04B24/32 C08F220/58 C08F2220/585 C08F2800/20 C04B28/16 C04B40/0039 C04B2103/0079 C04B2111/62

Family:

Publication number	Publication date	Application number	Application date
CN106458754 A	20170222	CN201580030869	20150612
EP2955165 A1	20151216	EP20140172088	20140612
EP3154916 A1	20170419	EP20150729805	20150612
US2017129812 AA	20170511	US20150318033	20150612
WO15189396 A1	20151217	WO2015EP63188	20150612

Priority:

EP20140172088 20140612 WO2015EP63188 20150612

Probable Assignee: BASF SE

Assignee(s): (std): BASF SE

Assignee(s): BASF CONSTRUCTION SOLUTIONS GMBH

Inventor(s): (std): EISSMANN DIANA ; FRIEDRICH STEFAN ; GAEDT TORBEN ; GASTNER THOMAS ; LANGLOTZ BJOERN ; MAZANEC OLIVER ; SCHINABECK MICHAEL

Agent(s): GASTNER THOMAS; BASF IP ASSOCIATION

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN106458754 A	20170222	LSPB	+	published / reissued	
CN106458754 A	20170222	LSPB	+C06	PUBLICATION	
EP2955165 A1	20151216	LSPB	+	published / reissued	
EP2955165 A1	20160615	LSWD	-18W	WITHDRAWN	EFFECTIVE DATE : 20160511
EP3154916 A1	20170419	LSPB	+	published / reissued	
EP3154916 A1	20170419	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20170112
US2017129812 AA	20170511	LSPB	+	published / reissued	
US2017129812 AA	20161228	LSAS	AS	ASSIGNMENT	PARTYTYPE : OWNER OWNER : BASF CONSTRUCTION SOLUTIONS GMBH, GERMANY OLDPARTY : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:LANGLOTZ, BJOERN; GASTNER, THOMAS; GAEDT, TORBEN; AND OTHERS; SIGNING DATES FROM 20161209 TO 20161213; REEL/FRAME:040781/0519
WO15189396 A1	20151217	LSPB	+	published / reissued	
WO15189396 A1	20161212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2016572613 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
WO15189396 A1	20161212	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : DE

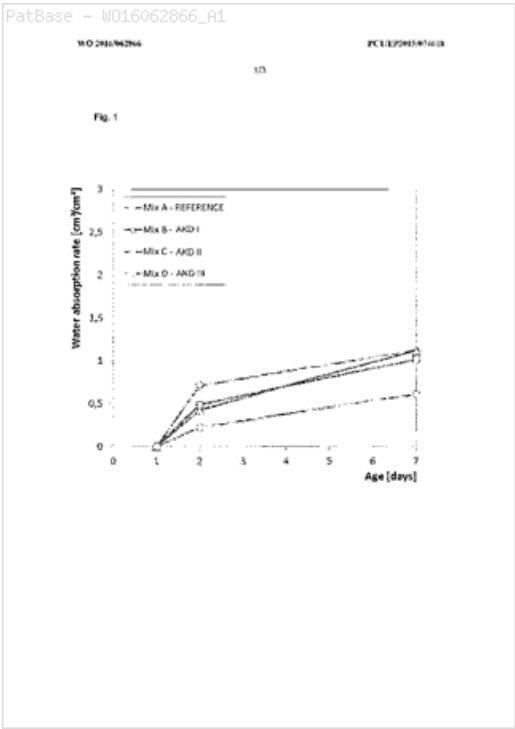
WO15189396 A1	20170112	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2017100542 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A DESIGNATED STATE(S) :
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Title: A PROCESS FOR HYDROPHOBIZATION OF CONCRETE

Abstract: The invention relates to a process for hydrophobization of concrete or mortar using an alkylketene dimer dispersion and to the concrete or mortar obtainable by the process of the invention. The process allows to achieve effective mass and surface hydrophobization of concrete.

Classifications:

International (IPC 8-9): C04B24/00 C04B28/04 C04B40/00 C04B41/46 (Advanced/Invention)
CPC: C04B24/008 C04B28/04 C04B40/0039 C04B41/46 C04B2111/1006 C04B2111/1012 C04B2111/27 C04B41/009 C04B41/62



Family:

Publication number	Publication date	Application number	Application date
WO16062866 A1	20160428	WO2015EP74618	20151023

Priority:

EP20140190059 20141023

Probable Assignee: BASF SE

Assignee(s): (std): BASF SE

Inventor(s): (std): ASSMANN ALEXANDER ; GAEDT TORBEN ; GEHRIG UWE ; PICHLER MARTIN ; SEIP KLAUS

Agent(s): REITSTOETTER KINZEBACH

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
WO16062866 A1	20160428	LSPB	+	published / reissued	

Title: LIQUID COLORING SUSPENSION AND COLORED CEMENTITIOUS COMPOSITION

Abstract: Source: US2016221874A A colored cementitious composition is provided that is composed of hydraulic cement and a liquid coloring suspension. The liquid coloring suspension for cementitious compositions contains polycarboxylate dispersant, pigment, and a polysaccharide thixotropic additive. The liquid coloring suspension has improved viscosity consistency, improved shelf-life, anti-settling and anti-sludging properties, and decreased polycarboxylate dispersant requirements.

Classifications:

International (IPC 8-9): C04B14/30 C04B16/00 C04B24/38 C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B24/38 C04B14/308 C04B14/305 C04B16/00 C04B28/04 C04B2111/82 C04B40/0039 C04B2103/54 Y02W30/92 Y02W30/94

US: 106/15.05

Family:

Publication number	Publication date	Application number	Application date
US2016221874 AA	20160804	US20150881769	20151013
WO16124470 A1	20160811	WO2016EP51760	20160128

Priority:

US20150111455P 20150203 US20150881769 20151013

Probable Assignee: CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Assignee(s): (std): CONSTR RES AND TECH GMBH ; CONSTRUCTION RES AND TECH GMBH ; CONSTRUCTION RESEARCH AND TECHNOLOGY GMBH

Inventor(s): (std): HEVENER ERIC ; SMITH JAMES CURTIS

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2016221874 AA	20160804	LSPB	+	published / reissued	
US2016221874 AA	20170501	LSES	NFA1	Non Final Action Mailed	
WO16124470 A1	20160811	LSPB	+	published / reissued	

Title: POLYMER BLENDS IN THE FORM OF AQUEOUS DISPERSIONS OR POWDERS THAT CAN BE RE-DISPERSED IN WATER

Abstract: The invention relates to polymer blends in the form of aqueous dispersions or powders that can be re-dispersed in water, containing: A) one or more polymers of one or more vinyl halides and, where appropriate, of one or more additional ethylenically-unsaturated monomers, and B) one or more vinyl halide-free polymers of one or more ethylenically-unsaturated monomers.

Classifications:

International (IPC 8-9): C04B24/24 C04B28/04 C04B40/00 C08J3/00 C08J3/12 C08L27/06 C08L31/04 C08L33/10 C09D5/34 C09J131/04 (Advanced/Invention); C04B103/00 (Advanced/Non-invention)

CPC: C04B28/04 C04B2103/0057 C08L2205/02 C08L2205/025 C09D5/34 C04B40/0042 C09D5/022 C04B40/0039 C04B2111/00517 C04B2111/00637 C04B2111/00672 C04B2111/60 C04B2111/70 C04B2111/72

Family:

Publication number	Publication date	Application number	Application date
DE102015203227 A1	20160825	DE201510203227	20150223
WO16135039 A1	20160901	WO2016EP53468	20160218

Priority:

DE201510203227 20150223

Probable Assignee: WACKER CHEMIE AG

Assignee(s): (std): WACKER CHEMIE AG

Inventor(s): (std): DIETRICH ULF ; FRITZE PETER ; SORGER KLAS ; WEITZEL HANS PETER

Agent(s): EGE MARKUS ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
DE102015203227 A1	20160825	LSPB	+	published / reissued	
WO16135039 A1	20160901	LSPB	+	published / reissued	

Title: METHOD FOR PROCESSING RADIOACTIVE LIQUID WASTE

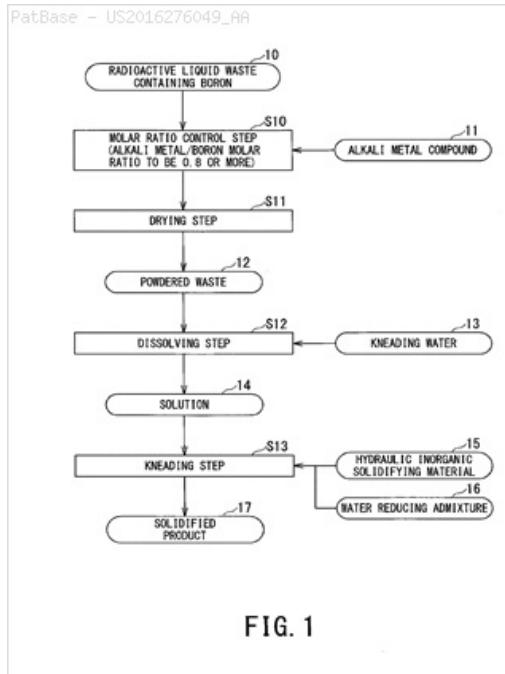
Abstract: Source: US2016276049A A method for processing a radioactive liquid waste containing boron of the present invention includes: a molar ratio control step of adding an alkali metal or an alkali metal compound to a radioactive liquid waste containing boron to control an alkali metal/boron molar ratio in the radioactive liquid waste to be 0.8 or more; a drying step of drying the radioactive liquid waste having the controlled molar-ratio using a dryer to form a powdered waste; a dissolving step of mixing the powdered waste with kneading water to prepare a solution; and a kneading step of adding a hydraulic inorganic solidifying material to the solution, and kneading the hydraulic inorganic solidifying material and the solution for solidification.

Classifications:

International (IPC 8-9): C04B28/04 C04B40/00 G21F9/06 G21F9/08 G21F9/16 (Advanced/Invention)

CPC: G21F9/08 C04B40/0039 C04B28/04 C04B2111/00767 G21F9/06 G21F9/162 G21F9/165

US: 588/3

**Family:**

Publication number	Publication date	Application number	Application date
CN105989903 A	20161005	CN201610124507	20160304
EP3070718 A1	20160921	EP20160158664	20160304
JP2016173359 A2	20160929	JP20160040207	20160302
US2016276049 AA	20160922	US20160059709	20160303

Priority:

JP20150052378 20150316 JP20160040207 20160302

Probable Assignee: TOSHIBA CORP

Assignee(s): (std): TOSHIBA CORP ; TOSHIBA KK

Inventor(s): (std): ARAI RIE ; KANEKO MASAOKI ; MOTOHASHI TETSUO ; OKABE HIROFUMI ; OKABE HIROSHI ; SATO TATSUAKI ; SATO YOHEI ; SUGIMORI TOSHIKI

Agent(s): TAKEUCHI MAYA

Designated states: AL AT BA BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
CN105989903 A	20161005	LSPB	+	published / reissued	
CN105989903 A	20161005	LSPB	+C06	PUBLICATION	
EP3070718 A1	20160921	LSPB	+	published / reissued	
EP3070718 A1	20170426	LSSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20170321
JP2016173359 A2	20160929	LSPB	+	published / reissued	
US2016276049 AA	20160922	LSPB	+	published / reissued	
US2016276049 AA	20160303	LSAS	AS	ASSIGNMENT	OWNER NAME : KABUSHIKI KAISHA TOSHIBA, JAPAN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:OKABE, HIROFUMI; KANEKO, MASAOKI; SATO, TATSUAKI;

AND OTHERS; SIGNING DATES FROM
20160216 TO 20160224;
REEL/FRAME:037883/0957

US2016276049 AA 20170324

LSES

NFA1

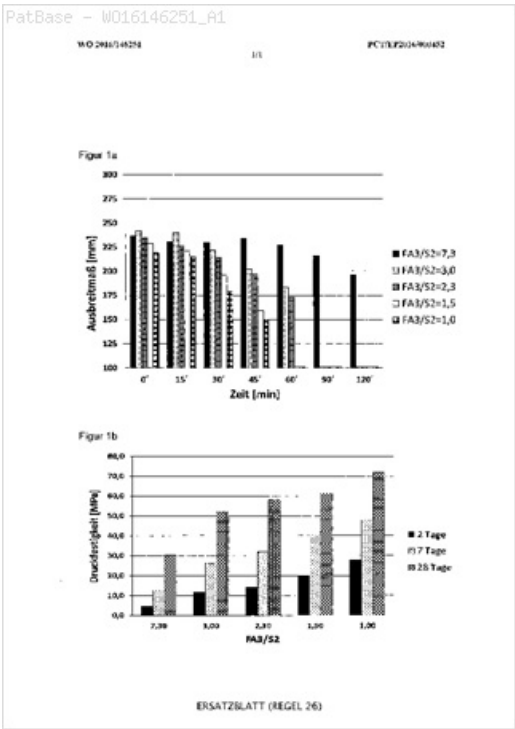
Non Final
Action Mailed

Title: RETARDING MIXTURE FOR ALKALI-ACTIVATED BINDING AGENT

Abstract: The invention relates to a retarding mixture comprising sodium gluconate and alkali hydrogen carbonate, an alkali-activated binding agent containing sodium gluconate and alkali hydrogen carbonate, and to a method for adjusting the development of strength, in which sodium gluconate and alkali hydrogen carbonate are added to an alkali-activated binding agent.

Classifications:

International (IPC 8-9): C04B28/00 C04B28/02 C04B28/04 C04B28/08 C04B28/18 C04B28/26 C04B40/00 (Advanced/Invention)
CPC: C04B40/0039 C04B28/006 C04B28/021 C04B28/04 C04B28/08 C04B28/18 C04B28/26 C04B2111/1062 C04B2111/21 Y02P40/165 Y02W30/92 Y02W30/94



Family:

Publication number	Publication date	Application number	Application date
EP3070065 A1	20160921	EP20150000784	20150317
WO16146251 A1	20160922	WO2016EP00452	20160314

Priority:

EP20150000784 20150317

Probable Assignee: HEIDELBERGCEMENT AG

Assignee(s): (std): HEIDELBERGCEMENT AG

Inventor(s): (std): BLAUM PETER ; BULLERJAHN FRANK ; ZAJAC MACIEJ

Agent(s): WAGNER JUTTA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
EP3070065 A1	20160921	LSPB	+	published / reissued	
WO16146251 A1	20160922	LSPB	+	published / reissued	

Title: FATTY ALCOHOL AQUEOUS SUSPENSION-BASED ANTI-FILMING SURFACE ADMIXTURE

Abstract: The present invention relates to a composition comprising at least: - an ethoxylated fatty alcohol having from 8 to 22 carbon atoms and having an ethoxylation level of from 1 to 10 moles of ethylene oxide per mole of fatty alcohol, - an alkanolamine or a morpholine, or its derivatives or mix of them, and - a fatty acid. The present invention also relates to the use of the composition as an admixture for a hydraulic binder, and to the use of the composition for preventing the formation of a surface film at the surface of a hydraulic binder. The present invention relates also to a hydraulic binder, comprising the composition, and to a process for preventing the formation of a surface film at the surface of hydraulic binders, wherein the composition is added to the dry hydraulic binder. The present invention also relates to a process for preparing the composition, comprising the steps of: a) melting the ethoxylated fatty alcohol and heating it at a temperature above its melting point, b) adding water to the melted ethoxylated fatty alcohol obtained from step a), and mixing, c) adding fatty acid to the mixture obtained from step b), and mixing, d) adding alkanolamine or morpholine, or its derivative or mix of them to the mixture obtained from step c), and mixing, e) adding water, f) thereby obtaining a composition as defined in claim 1.

Classifications:

International (IPC 8-9): C04B111/21 C04B111/60 C04B28/04

C04B28/14 C04B28/16 C04B40/00 (Advanced/Invention);

C04B111/21 C04B111/60 (Advanced/Non-invention)

CPC: C04B40/0039 C04B28/04 C04B28/145 C04B28/16

C04B2111/21 C04B2111/60

PatBase - WO16189062_A1

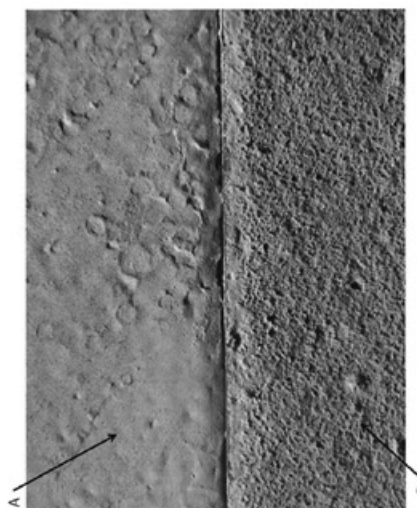


Figure 2

Family:

Publication number	Publication date	Application number	Application date
WO16189062 A1	20161201	WO2016EP61855	20160525

Priority:

EP20150305801 20150527

Probable Assignee: SIKA TECH AG

Assignee(s): (std): SIKA TECH AG

Assignee(s): SIKA TECHNOLOGY AG

Inventor(s): (std): HERR OLIVER ; MONGE JOACHIM ; NIGAUD JUSTINE ; QUALLET JEAN JACQUES ; ROLLAND JEROME

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
WO16189062 A1	20161201	LSPB	+	published / reissued	

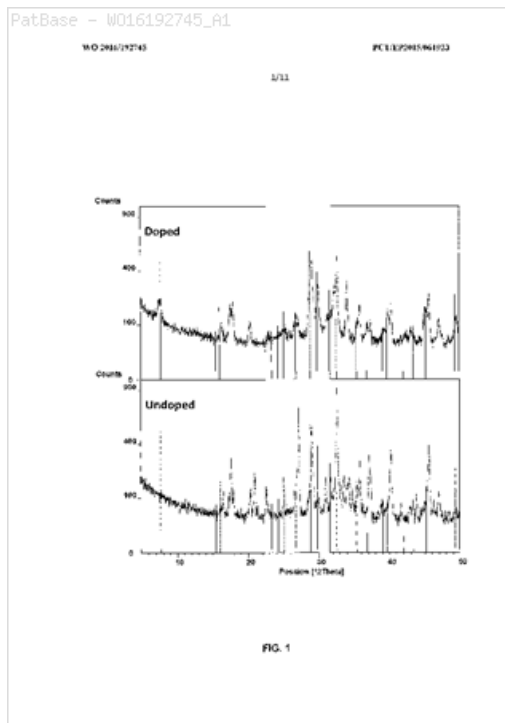
Title: METHOD FOR THE MANUFACTURE OF CALCIUM SILICATE HYDRATE USED AS HARDENING ACCELERATOR IN CONCRETE AND CEMENT-BASED MATERIALS, CALCIUM SILICATE HYDRATE MANUFACTURED WITH SAID METHOD

Abstract: A process for the manufacturing of a slurry containing nucleating agents which comprises reacting at least one source of a Ca containing compound with at least one source of a Si containing compound, in an aqueous media and in the presence of a doping agent selected from the group consisting of P, B, S, and mixtures thereof; wherein: (i) the reaction is carried out at a temperature comprised from 100 to 350 degrees C; (ii) the total molar ratio Ca/Si is 1.5 - 2.5, and (iii) the total molar ratio doping agent/Si is 0.01 - 2; provided that: (a) when the sole doping agent is P, the total molar ratio P/Si is 0.1 - 2; (b) when the sole doping agent is B, the total molar ratio B/Si is 0.01 - 2, and (c) when the sole doping agent is S, the total molar ratio S/Si is 0.1 - 2.

Classifications:

International (IPC 8-9): C01B33/24 C04B14/04 C04B22/00 C04B40/02 (Advanced/Invention)

CPC: C04B22/0086 C01B33/24 C04B14/043 C04B40/0042 C04B40/024 Y02W30/92 Y02W30/94



Family:

Publication number	Publication date	Application number	Application date
WO16192745 A1	20161208	WO2015EP61923	20150529

Priority:

WO2015EP61923 20150529

Probable Assignee: FUND TECNALIA RES AND INNOVATION

Assignee(s): (std): FUND TECNALIA RES AND INNOVATION

Assignee(s): FUNDACION TECNALIA RESEARCH AND INNOVATION

Inventor(s): (std): GAITERO REDONDO JUAN JOSE ; SANCHEZ DOLADO JORGE

Agent(s): ZBM PATENTS ZEA BARLOCCI AND MARKVARDSEN

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
WO16192745 A1	20161208	LSPB	+	published / reissued	

Title: CASTABLE MATERIAL BASED ON CEMENTITIOUS MATERIAL WITH SHRINKAGE RESISTANCE

Abstract: The present invention relates to a new castable cement based material containing a special admixture based internal curing system to reduce the shrinkage and avoid the formation of cracks, and method of producing the same.

Classifications:

International (IPC 8-9): C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B28/04 C04B40/0039 C04B40/0046 C04B2103/0049 C04B2103/0051

Family:

Publication number	Publication date	Application number	Application date
WO17025770 A1	20170216	WO2015IB56025	20150807

Priority:

WO2015IB56025 20150807

Probable Assignee: CEMEX RES GROUP AG

Assignee(s): (std): CEMEX RES GROUP AG

Assignee(s): CEMEX RESEARCH GROUP AG

Inventor(s): (std): CHIAVERINI JESSICA ; SALMEN WOLFGANG ; ZAMPINI DAVIDE

Agent(s): NOVAGRAAF TECHNOLOGIES

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
WO17025770 A1	20170216	LSPB	+	published / reissued	

Title: SELF-DISPERSIBLE MIXTURE SILICON ADDITIVE COMPOSITION, ITS EMULSION AND ITS USE THEREOF

Abstract: A composition comprising a self-dispersible mixture additive composition comprising a alkylalkoxysilane of formula (RO)_{4-n}SiR'ⁿ, or its hydrolysate or mixture thereof, where, R is same or different C1-C20, R' is same or different C1-C20; mixture of non-ionic emulsifier of HLB value between 8 and 20. The self-dispersible mixture additive composition is obtained by mixing the alkyltrialkoxysilane with a mixture of non-ionic emulsifier. The emulsion of the self-dispersible mixture additive composition is formed by mixing appropriate amount of an aqueous solvent to the self-dispersible mixture additive composition, and addition of thus formed emulsion to a porous product preferably dry cement to render uniform and long lasting hydrophobic property of the final product made of the porous product.

Classifications:

International (IPC 8-9): C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B40/0039 C04B28/04 C04B2111/27

Family:

Publication number	Publication date	Application number	Application date
WO17064624 A1	20170420	WO20161B56091	20161012

Priority:

IN2015K001076 20151012

Probable Assignee: WACKER METROARK CHEMICALS PVT LTD

Assignee(s): (std): WACKER METROARK CHEMICALS PVT LTD

Inventor(s): (std): PAUL AMIT KUMAR ; TARAFDAR ABHIJIT

Agent(s): MAJUMDAR SUBHATOSH ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

[View legal status timeline](#)

Patent	Date recorded	Event group	Code	Event	Details
WO17064624 A1	20170420	LSPB	+	published / reissued	

Title: FASTENING SYSTEM AND USE THEREOF

Abstract: The present invention pertains to a fastening system for chemically fastening of anchoring means in mineral surfaces, such as structures made of brickwork, concrete, pervious concrete or natural stone. The fastening system comprises a chemical anchor being a ready-for-use two-component mortar system based on aluminous cement and an anchor rod, comprising an attachment region and an anchoring region which is insertable into a borehole and which has a profiled section including a plurality of expansion sections disposed axially in a row which are conically shaped, to be chemically fastened in a mineral surface.

Classifications:

International (IPC 8-9): C04B103/00 C04B111/28 C04B28/06 C04B40/06 E21D20/02 E21D21/00 F16B13/02

F16B13/14 (Advanced/Invention);

C04B103/00 C04B111/00 C04B111/28 (Advanced/Non-invention)

CPC: C04B40/065 C04B28/06 C04B28/065 C04B40/0625 C04B40/0666 C04B2103/0008 C04B2111/00715 C04B2111/00724 C04B2111/28 C04B28/145 C04B40/0039 C04B2103/12 C04B2103/14 E21D20/021 E21D21/008 F16B13/02 F16B13/141

Family:

Publication number	Publication date	Application number	Application date
WO17067951 A1	20170427	WO2016EP75022	20161019
WO17067952 A1	20170427	WO2016EP75023	20161019
WO17067953 A1	20170427	WO2016EP75024	20161019
WO17067954 A1	20170427	WO2016EP75027	20161019
WO17067956 A1	20170427	WO2016EP75031	20161019

Priority:

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Probable Assignee: HILTI AG

Assignee(s): (std): HILTI AG

Inventor(s): (std): BEROLL PASCAL ; BUNZEN JENS ; FALGER CHRISTIAN ; GARBATSCHECK DOMINIK ; GIESSMANN GREGOR ; PFEIL ARMIN ; SHARMAK ANNA ; SIRCH VANESSA

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
WO17067951 A1	20170427	LSPB	+	published / reissued	
WO17067952 A1	20170427	LSPB	+	published / reissued	
WO17067953 A1	20170427	LSPB	+	published / reissued	
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WO17067956 A1	20170427	LSPB	+	published / reissued	

Title: ADDITIVE FOR INTERNAL POST TREATMENT OF MINERAL BINDER COMPOSITIONS

Abstract: The invention relates to an additive for mineral binder compositions, in particular a post-treatment agent for mineral binder compositions, comprising at least one water-absorbing substance and at least one shrinkage reducing agent.

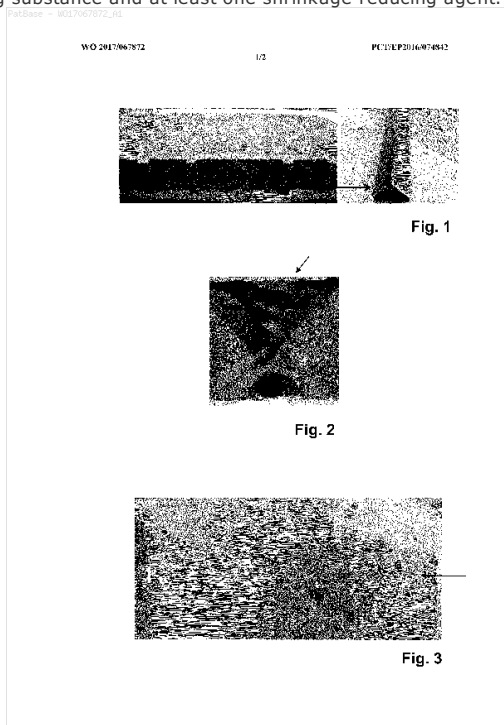
Classifications:

International (IPC 8-9): C04B28/04 C04B40/00 (Advanced/Invention)

CPC: C04B40/0039 C04B28/04 C04B2111/20 C04B2111/2038

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PatBase - WO17067872_A1



Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: SIKA TECH AG

Assignee(s): (std): SIKA TECH AG

Assignee(s): SIKA TECHNOLOGY AG

Inventor(s): (std): BUERGE CHRISTIAN ; MAEDER GILBERT ; WOMBACHER FRANZ

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

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Patent	Date recorded	Event group	Code	Event	Details
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