

Search query (2): [SP]: 1. a method of treating oilfield produced water, the method comprising: passing the oilfield produced water through a chain of filters, the chain comprising a first filter configured to filter particles of a size larger than 10 micro m from the water, a second filter configured to filter remaining particles of a size larger than 2 micro m from the water and a third filter configured to filter remaining particles of a size larger than 0.5 micro m from the water automatically cleaning the first filter when a first pressure drop related to the first filter is above a first threshold value and automatically cleaning the second filter when a pressure drop related to the second filter is above a second threshold value. 2. the method of claim 1, further comprising: automatically cleaning the third filter when a third pressure drop related to the third filter is above a third threshold value. 3. the method of claim 1, wherein the oilfield produced water to be treated comprises less than 20 mg/liter oil and grease. 4. the method of claim 1, wherein cleaning the first filter is by washing the first filter with treated water. 5. the method of claim 1, wherein cleaning the first filter is by using a rotating brush assembly. 6. the method of claim 1, wherein cleaning the second filter is by water jets having a pressure larger than 5 bar. 7. the method of claim 1, further comprising: periodically cleaning the second filter using a detergent for removing oil. 8. the method of claim 1, wherein after passing the water through an extra-fine filter the water contains less than 0.2 mg/liter residual oil. 9. the method of claim 1, wherein after passing the water through the third filter the water contains less than less than 3 mg/liter total organic carbon (toc). 10. a system for treating brackish water, comprising: a chain of filters comprising: a first filter figured to filter particles larger than 10 micro m a second filter configured to filter particles larger than 2 micro m and a third filter configured to filter particles larger than 0.5 micro m a cleaning system comprising: a first cleaning system for cleaning the first filter and a second cleaning system for cleaning the second filter and a controller configured to automatically instruct: the first cleaning system to clean the first filter when a pressure drop on the first filter is above a first threshold value and the second cleaning system to clean the second filter when a pressure drop on the second filter is above a second threshold value. 11. the system of claim 10, wherein the cleaning system further comprises a third cleaning system to clean the third filter, and the controller is further configured to automatically instruct the third cleaning system to clean the third filter when a pressure drop on the third filter is above a third threshold value. 12. the system of claim 10, further comprising: a first pressure gauge associated with the first filter and the controller is further configured to: receive a first pressure measurement from the first pressure gauge related to the pressure drop on the first filter. 13. the system of claim 10, further comprising: a second pressure gauge associated with the second filter, wherein the controller is further configured to receive a second pressure measurement from the second pressure gauge related to the pressure drop on the second filter. 14. the system of claim 11, further comprising: a third pressure gauge associated with the third filter, wherein the controller is further configured to receive a third pressure measurement from the third pressure gauge related to the pressure drop on the third filter. 15. the system of claim 10, wherein the first cleaning system is configured to wash the coarse filter with treated water. 16. the system of claim 10, wherein the first cleaning system comprises rotating brush assembly. 17. the system of claim 10, wherein the second cleaning system comprises water jets.

Results: 5

Search history

Search TAC=(Water and first filter and second filter and third filter and cleaning and pressure drop) (Results 2)

1:

Search [SP]: 1. a method of treating oilfield produced water, the method comprising: passing the oilfield produced water through a chain of filters, the chain comprising a first filter configured to filter particles of a size larger than 10 micro m from the water, a second filter configured to filter remaining particles of a size larger than 2 micro m from the water and a third filter configured to filter remaining particles of a size larger than 0.5 micro m from the water automatically cleaning the first filter when a first pressure drop related to the first filter is above a first threshold value and automatically cleaning the second filter when a pressure drop related to the second filter is above a second threshold value. 2. the method of claim 1, further comprising: automatically cleaning the third filter when a third pressure drop related to the third filter is above a third threshold value. 3. the method of claim 1, wherein the oilfield produced water to be treated comprises less than 20 mg/liter oil and grease. 4. the method of claim 1, wherein cleaning the first filter is by washing the first filter with treated water. 5. the method of claim 1, wherein cleaning the first filter is by using a rotating brush assembly. 6. the method of claim 1, wherein cleaning the second filter is by water jets having a pressure larger than 5 bar. 7. the method of claim 1, further comprising: periodically cleaning the second filter using a detergent for removing oil. 8. the method of claim 1, wherein after passing the water through an extra-fine filter the water contains less than 0.2 mg/liter residual oil. 9. the method of claim 1, wherein after passing the water through the third filter the water contains less than less than 3 mg/liter total organic carbon (toc). 10. a system for treating brackish water, comprising: a chain of filters comprising: a first filter figured to filter particles larger than 10 micro m a second filter configured to filter particles larger than 2 micro m and a third filter configured to filter particles larger than 0.5 micro m a cleaning system comprising: a first cleaning system for cleaning the first filter and a second cleaning system for cleaning the second filter and a controller configured to automatically instruct: the first cleaning system to clean the first filter when a pressure drop on the first filter is above a first threshold value and the second cleaning system to clean the second filter when a pressure drop on the second filter is above a second threshold value. 11. the system of claim 10, wherein the cleaning system further comprises a third cleaning system to clean the third filter, and the controller is further configured to automatically instruct the third cleaning system to clean the third filter when a pressure drop on the third filter is above a third threshold value. 12. the system of claim 10, further comprising: a first pressure gauge associated with the first filter and the controller is further configured to: receive a first pressure measurement from the first pressure gauge related to the pressure drop on the first filter. 13. the system of claim 10, further comprising: a second pressure gauge associated with the second filter, wherein the controller is further configured to receive a second pressure measurement from the second pressure gauge related to the pressure drop on the second filter. 14. the system of claim 11, further comprising: a third pressure gauge associated with the third filter, wherein the controller is further configured to receive a third pressure measurement from the third pressure gauge related to the pressure drop on the third filter. 15. the system of claim 10, wherein the first cleaning system is configured to wash the coarse filter with treated water. 16. the system of claim 10, wherein the first cleaning system comprises rotating brush assembly. 17. the system of claim 10, wherein the second cleaning system comprises water jets. (Results 5)

1) Family number: 11561620 (US6273031B)

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Title: Clean lubricant circulation system

Abstract: Source: US6273031B A combination in situ oil filter purge and oil replacement system is provided in a lubrication system, including for an internal combustion engine (10). A purge system backflushes the oil filter (12) and re-circulates backflushed used oil. A replacement system supplies fresh oil to the filter (12).

Classifications:

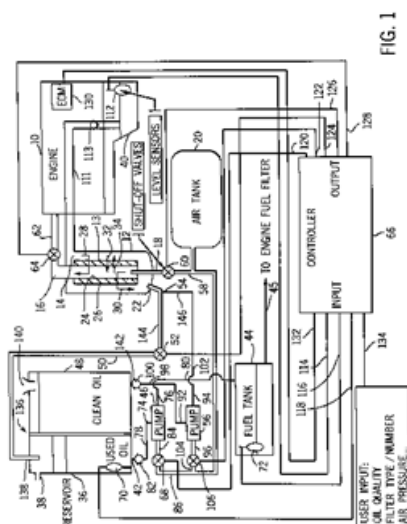
International (IPC 8-9): F01M11/04 (Advanced/Invention);
F01M11/04 (Core/Invention)

International (IPC 1-7): F01M1/10 F01M11/04 F02B75/00

CPC: F01M11/0458

European: F01M11/04D

US: 123/196A 123/1A



Publication number	Publication date	Application number	Application date
AU199963075 A1	20000615	AU19990063075	19991203
AU199963075 A5	20000615	AU19990063075	19991203
AU751946 B2	20020905	AU19990063075	19991203
DE69926710 D1	20050922	DE19996026710	19991209
DE69926710 T2	20060629	DE19996026710T	19991209
EP1008731 A1	20000614	EP19990309900	19991209
EP1008731 B1	20050817	EP19990309900	19991209
US6273031 BA	20010814	US19980210363	19981211

Designated states: DE FR GB

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Patent	Date recorded	Event group	Code	Event	Details
AU199963075 A1	20000615	LSPB	+	published / reissued	
AU199963075 A5	20000615	LSPB	+	published / reissued	
AU751946 B2	20020905	LSGT	+	granted / extensions (spc, cpc, pte)	
AU751946 B2	20030109	LSGT	+FGA	LETTERS PATENT SEALED OR GRANTED (STANDARD PATENT)	
DE69926710 D1	20060907	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE69926710 T2	20060629	LSGT	+	granted / extensions (spc, cpc, pte)	

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EP1008731 A1	20010228	LSFE	+AKX	PAYMENT OF DESIGNATION FEES	DESCRIPTION : DE FR GB
EP1008731 A1	20040225	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20040113
EP1008731 A1	20050316	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : SCHWANDT, BRIAN W.
EP1008731 A1	20050316	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : STEHOUSER, DAVID M.
EP1008731 A1	20050316	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : FALLON, STEPHEN L.
EP1008731 A1	20050316	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : HERMAN, PETER K.
EP1008731 A1	20050316	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : VERDEGAN, BARRY M.
EP1008731 A1	20050817	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : GB REF LEGAL EVENT CODE : FG4D
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US6273031 BA	20010814	LSGT	+	granted / extensions (spc, cpc, pte)	
US6273031 BA	19990222	LSAS	AS	ASSIGNMENT	OWNER NAME : NELSON INDUSTRIES, INC., WISCONSIN DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:VERDEGAN, BARRY M.; HERMAN, PETER K.; STEHOUWER, DAVID M.; AND OTHERS; REEL/FRAME:009779/0133; SIGNING DATES FROM 19981208 TO 19981209
US6273031 BA	20050214	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6273031 BA	20090217	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US6273031 BA	20130214	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 12

2) Family number: 14922982 (US6500344B)

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Title: Method and apparatus for filtering particles out of a liquid

Abstract: Source: US6500344B Method and arrangement for filtering particles out of a liquid, in which the liquid containing particles is supplied to a sedimentation tank (12), and the liquid is made, by means of hydrostatic liquid pressure prevailing in the tank, to flow through a filter member (18) on the shell surface of a drum (14) mounted in the tank (12). When the liquid in the tank has risen to a predetermined level above the drum (14) as a result of clogging of the filter member (18), cleaning of the filter member (18) in situ in the tank is initiated.

Classifications:

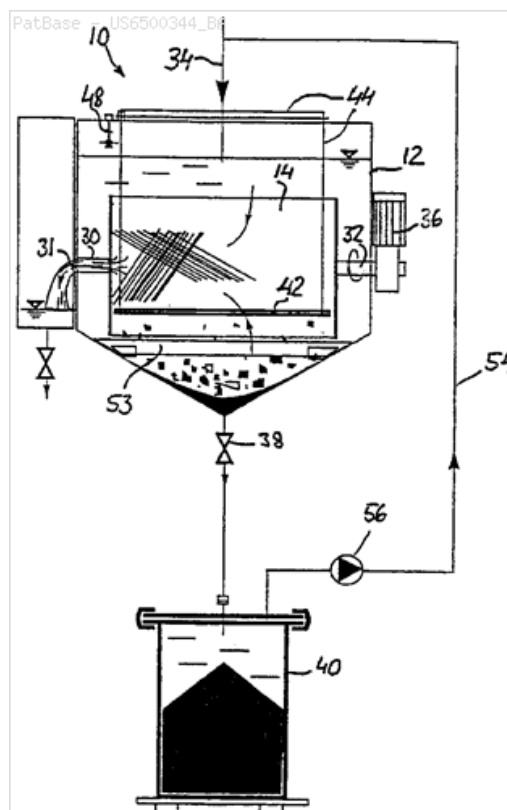
International (IPC 8-9): B01D24/08 B01D29/15 B01D33/073 B01D36/04 (Advanced/Invention); B01D24/02 B01D29/13 (Core/Invention)

International (IPC 1-7): B01D33/073 B01D33/46 B01D33/50 B01D36/04 B01D37/00

CPC: B01D24/08 B01D29/15

European: B01D24/08 B01D29/15

US: 210/107 210/121 210/123 210/197 210/262 210/396 210/402 210/408 210/411 210/532.1 210/744 210/784 210/791 210/805 210/97



Family:

Publication number	Publication date	Application number	Application date
AT337065 E	20060915	AT20000930010T	20000503
AU200047910 A5	20001117	AU20000047910D	20000503

CN1147344 C	20040428	CN20008000743	20000503
CN1302220 A	20010704	CN20008000743	20000503
DE60030231 D1	20061005	DE20006030231	20000503
DE60030231 T2	20071011	DE20006030231T	20000503
EP1098690 A1	20010516	EP20000930010	20000503
EP1098690 B1	20060823	EP20000930010	20000503
ES2270831 T3	20070416	ES20000930010T	20000503
SE514311 C2	20010205	SE19990001577	19990503
SE9901577 A	20001104	SE19990001577D	19990503
SE9901577 A0	19990503	SE19990001577	19990503
SE9901577 L	20001104	SE19990001577	19990503
US6500344 BA	20021231	US20010720874	20010102
WO0066246 A1	20001109	WO2000SE00852	20000503

Priority:

SE19990001577 19990503 WO2000SE00852 20000503

Probable Assignee: VIVEX AB

Assignee(s): (std): HYOSONG LEE ; LEE HYOSONG ; LEE HYOSONG M ; VIVEX AB ; EHNSTROEM LARS

Assignee(s): EHNSTROM LARS

Inventor(s): (std): EHNSTROEM LARS ; EHNSTROM LARS ; EHNSTRUM LARS ; HYOSONG LEE ; LEE HYOSONG

Inventor(s): LARS EHNSTROEM ; LARS EHNSTROM ; LARS EHNSTRUM

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY 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 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
AT337065 E	20060915	LSGT	+	granted / extensions (spc, cpc, pte)	
AT337065 E	20070215	LSLE	-RER	CEASED AS TO PARAGRAPH 5 LIT. 3 LAW INTRODUCING PATENT TREATIES	
AU200047910 A5	20001117	LSPB	+	published / reissued	
AU200047910 A5	20010329	LSLE	-MK6	APPLICATION LAPSED SECTION 142(2)(F)/REG. 8.3(3) - PCT APPLIC. NOT ENTERING NATIONAL PHASE	
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CN1147344 C	20010704	LSPB	+C06	PUBLICATION	
CN1147344 C	20040428	LSGT	+C14	GRANT OF PATENT OR UTILITY MODEL	
CN1147344 C	20120711	LSLE	-C17	CESSATION OF PATENT RIGHT	
CN1302220 A	20010704	LSPB	+	published / reissued	
DE60030231 D1	20070913	LSGT	+8364	NO OPPOSITION DURING TERM OF OPPOSITION	
DE60030231 T2	20071011	LSGT	+	granted / extensions (spc, cpc, pte)	
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EP1098690 A1	20060915	LSNP	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : CH REF LEGAL EVENT CODE : EP
EP1098690 A1	20060920	LSGT	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : IE REF LEGAL EVENT CODE : FG4D
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				CONTRACTING STATE ANNOUNCED VIA POSTGRANT INFORM. FROM NAT. OFFICE TO EPO	DESCRIPTION : LAPSE BECAUSE OF NON-PAYMENT OF DUE FEES EFFECTIVE DATE : 20110531
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EP1098690 A1	20130628	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 : 20111130
EP1098690 A1	20131029	LSLE	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : ES REF LEGAL EVENT CODE : FD2A EFFECTIVE DATE : 20131029
EP1098690 A1	20131031	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 : 20110504
EP1098690 B1	20060823	LSGT	+	granted / extensions (spc, cpc, pte)	
ES2270831 T3	20070416	LSGT	+	granted / extensions (spc, cpc, pte)	
SE514311 C2	20010205	LSGT	+	granted / extensions (spc, cpc, pte)	
SE514311 C2	20120110	LSLE	-NUG	PATENT HAS LAPSED	
SE9901577 A	20001104	LSPB	+	published / reissued	
US6500344 BA	20021231	LSGT	+	granted / extensions (spc, cpc, pte)	
US6500344 BA	20060607	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US6500344 BA	20101231	LSLE	-LAPS	LAPSE FOR FAILURE TO PAY MAINTENANCE FEES	
US6500344 BA	20110222	LSLE	-FP	EXPIRED DUE TO FAILURE TO PAY MAINTENANCE FEE	EFFECTIVE DATE : 20101231
WO0066246 A1	20001109	LSPB	+	published / reissued	
WO0066246 A1	20001220	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2000930010 COUNTRY OF REF DOCUMENT : EP
WO0066246 A1	20010102	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 09720874 COUNTRY OF REF DOCUMENT : US
WO0066246 A1	20010516	LSPB	+WWP	WIPO INFORMATION: PUBLISHED IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2000930010 COUNTRY OF REF DOCUMENT : EP
WO0066246 A1	20010906	LSWD	REG	REFERENCE TO NATIONAL CODE	REF COUNTRY CODE : DE REF LEGAL EVENT CODE : 8642
WO0066246 A1	20040206	LSNE	NENP	NON-ENTRY INTO THE NATIONAL PHASE IN:	REF COUNTRY CODE : JP
WO0066246 A1	20060823	LSGT	+WWG	WIPO INFORMATION: GRANT IN NATIONAL OFFICE	REF DOCUMENT NUMBER : 2000930010 COUNTRY OF REF DOCUMENT : EP

3) Family number: 41575536 (US2008053896A)

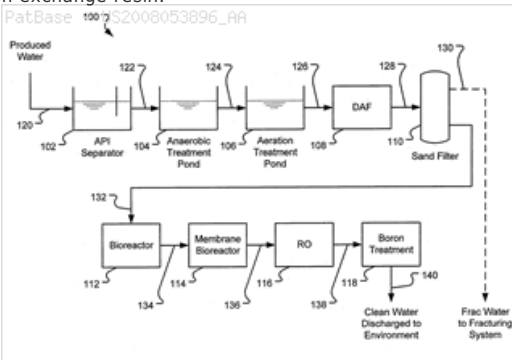
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Title: WASTE WATER TREATMENT SYSTEM AND METHOD

Abstract: Source: US2008053896A Systems and methods have been developed for reclaiming water contaminated with the expected range of contaminants typically associated with produced water, including water contaminated with slick water, methanol and boron. The system includes anaerobically digesting the contaminated water, followed by aerating the water to enhance biological digestion. After aeration, the water is separated using a flotation operation that effectively removes the spent friction reducing agents and allows the treated water to be reclaimed and reused as fracturing water, even though it

retains levels of contaminants, including boron and methanol, that would prevent its discharge to the environment under existing standards. The treated water may further be treated by removing the methanol via biological digestion in a bioreactor, separating a majority of the contaminants from the water by reverse osmosis and removing the boron that passes through the reverse osmosis system with a boron-removing ion exchange resin.

Classifications:
International (IPC 8-9): A62D3/00 B01D21/00 B01D61/14 C02F1/04 C02F1/42 C02F1/44 C02F11/04 C02F3/00 C02F3/30 C02F9/00 C02F9/02 C02F9/14 G05B13/02 (Advanced/Invention); C01B35/02 C02F1/42 C02F1/44 C02F101/32 C02F103/04 (Advanced/Non-invention); A62D3/00 C02F11/04 C02F3/00 C02F3/30 C02F9/02 C02F9/14 G05B13/02 (Core/Invention); C01B35/00 C02F1/42 C02F1/44 (Core/Non-invention)
CPC: Y10S210/902 C02F1/463 C02F3/286 Y02W10/15 C02F9/00 C02F1/001 C02F1/24 C02F1/42 C02F1/441 C02F3/1268 C02F3/30 C02F2103/365 C02F2101/32 Y02E50/343 C09K8/68 C02F3/12 C02F2209/003 C02F2209/05 C02F2209/11 C09K8/88
European: C02F9/00 C09K8/68 C09K8/88 M02F1/00D M02F1/24 M02F1/42 M02F1/44B M02F1/463 M02F101/32 M02F103/36P M02F209/00D M02F209/05 M02F209/11 M02F3/12 M02F3/12N9 M02F3/28S M02F3/30 Y02E50/34B
US: 210/151 210/151S 210/259 210/259S 210/538 210/603 210/605 210/610 210/611 210/620 210/621 210/622 210/630 210/631 210/652 210/652S 210/660 210/663 210/669 210/681 210/767 210/800 210/902 405/129.25 588/300 588/300P 588/410 588/410S 700/55 700/55S



Family:

Publication number	Publication date	Application number	Application date
US2008053896 AA	20080306	US20070685663	20070313
US2008053900 AA	20080306	US20070685636	20070313
US2008058576 AA	20080306	US20070685681	20070313
US2009236281 AA	20090924	US20090475091	20090529
US2010038310 AA	20100218	US20090399242	20090306
US2012152830 AA	20120621	US20120361005	20120130
US2013330128 AA	20131212	US20130966003	20130813
US7510656 BB	20090331	US20070685663	20070313
US7527736 BB	20090505	US20070685681	20070313
US7628919 BB	20091208	US20070685636	20070313
US7722770 BB	20100525	US20090475091	20090529
US8105488 BB	20120131	US20090399242	20090306
US8529763 BB	20130910	US20120361005	20120130
US8790514 BB	20140729	US20130966003	20130813

Priority:

US20060767574P	20060901	US20070685636	20070313	US20070685663	20070313
US20070685681	20070313	US20090475091	20090529	US20090399242	20090306
US20120361005	20120130	US20130966003	20130813		

Probable Assignee: ANTICLINE DISPOSAL LLC

Assignee(s): (std): EUBANK JESSE ; JAMES JOHN W ; SHAFER LEE L ; RATH RICHARD D ; ANTICLINE DISPOSAL LLC

Assignee(s): DEUTSCHE BANK TRUST CO AMERICAS COLLATERAL AGENT A ; DEUTSCHE BANK TRUST CO AMERICAS COLLATERAL AGENT AS

Inventor(s): (std): EUBANK JESSE ; JAMES JOHN W ; RATH RICHARD D ; SHAFER LEE L

Agent(s): GREENBERG TRAURIG LLP; MERCHANT AND GOULD PC

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2008053896 AA	20080306	LSPB	+	published / reissued	
US2008053900 AA	20080306	LSPB	+	published / reissued	
US2008058576 AA	20080306	LSPB	+	published / reissued	
US2009236281 AA	20090924	LSPB	+	published / reissued	
US2009236281 AA	20091102	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, SOUTH DAKOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAHER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; REEL/FRAME:023458/0282; SIGNING DATES FROM 20070309 TO 20070313
US2010038310 AA	20100218	LSPB	+	published / reissued	
US2010038310 AA	20090623	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, WYOMING DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAHER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; SIGNED BETWEEN 20090324 AND 20090403; US-ASSIGNMENT DATABASE UPDATED:20100218; REEL/FRAME:22863/712

US2010038310 AA	20090623	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC,WYOMING DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; SIGNING DATES FROM 20090324 TO 20090403; REEL/FRAME:022863/0712
US2012152830 AA	20120621	LSPB	+	published / reissued	
US2012152830 AA	20120626	LSAS	AS	ASSIGNMENT	OWNER NAME : DEUTSCHE BANK TRUST COMPANY AMERICAS, AS COLLATERA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:ANTICLINE DISPOSAL, LLC; REEL/FRAME:028442/0845 EFFECTIVE DATE : 20120619
US2013330128 AA	20131212	LSPB	+	published / reissued	
US7510656 BB	20090331	LSGT	+	granted / extensions (spc, cpc, pte)	
US7510656 BB	20070313	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, SOUTH DAKOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; REEL/FRAME:019004/0731; SIGNING DATES FROM 20070311 TO 20070313
US7510656 BB	20120626	LSAS	AS	ASSIGNMENT	OWNER NAME : DEUTSCHE BANK TRUST COMPANY AMERICAS, AS COLLATERA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:ANTICLINE DISPOSAL, LLC; REEL/FRAME:028442/0845 EFFECTIVE DATE : 20120619
US7510656 BB	20120828	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7510656 BB	20160928	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7527736 BB	20090505	LSGT	+	granted / extensions (spc, cpc, pte)	
US7527736 BB	20070313	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, SOUTH DAKOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; REEL/FRAME:019004/0776; SIGNING DATES FROM 20070309 TO 20070313
US7527736 BB	20120626	LSAS	AS	ASSIGNMENT	OWNER NAME : DEUTSCHE BANK TRUST COMPANY AMERICAS, AS COLLATERA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:ANTICLINE DISPOSAL, LLC; REEL/FRAME:028442/0845 EFFECTIVE DATE : 20120619
US7527736 BB	20120927	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US7527736 BB	20161031	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 8
US7628919 BB	20091208	LSGT	+	granted / extensions (spc, cpc, pte)	
US7628919 BB	20070313	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, SOUTH DAKOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; REEL/FRAME:019004/0467; SIGNING DATES FROM 20070309 TO 20070313
US7628919 BB	20120626	LSAS	AS	ASSIGNMENT	OWNER NAME : DEUTSCHE BANK TRUST COMPANY AMERICAS, AS COLLATERA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:ANTICLINE DISPOSAL, LLC; REEL/FRAME:028442/0845 EFFECTIVE DATE : 20120619
US7628919 BB	20130329	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4

US7722770 BB	20100525	LSGT	+	granted / extensions (spc, cpc, pte)	
US7722770 BB	20091102	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, SOUTH DAKOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; REEL/FRAME:023458/0282; SIGNING DATES FROM 20070309 TO 20070313
US7722770 BB	20091102	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, SOUTH DAKOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; SIGNED BETWEEN 20070309 AND 20070313; US-ASSIGNMENT DATABASE UPDATED:20100525; REEL/FRAME:23458/282
US7722770 BB	20091102	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, SOUTH DAKOTA DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; SIGNING DATES FROM 20070309 TO 20070313; REEL/FRAME:023458/0282
US7722770 BB	20120626	LSAS	AS	ASSIGNMENT	OWNER NAME : DEUTSCHE BANK TRUST COMPANY AMERICAS, AS COLLATERA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:ANTICLINE DISPOSAL, LLC; REEL/FRAME:028442/0845 EFFECTIVE DATE : 20120619
US7722770 BB	20131001	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8105488 BB	20120131	LSGT	+	granted / extensions (spc, cpc, pte)	
US8105488 BB	20090623	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, WYOMING DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; SIGNING DATES FROM 20090324 TO 20090403; REEL/FRAME:022863/0712
US8105488 BB	20090623	LSAS	AS	ASSIGNMENT	OWNER NAME : ANTICLINE DISPOSAL, LLC, WYOMING DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:SHAFER, LEE L.; RATH, RICHARD D.; EUBANK, JESSE; SIGNING DATES FROM 20090324 TO 20090403; REEL/FRAME:022863/0712
US8105488 BB	20120626	LSAS	AS	ASSIGNMENT	OWNER NAME : DEUTSCHE BANK TRUST COMPANY AMERICAS, AS COLLATERA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:ANTICLINE DISPOSAL, LLC; REEL/FRAME:028442/0845 EFFECTIVE DATE : 20120619
US8105488 BB	20151204	LSFE	+FPAY	FEE PAYMENT	YEAR OF FEE PAYMENT : 4
US8529763 BB	20130910	LSGT	+	granted / extensions (spc, cpc, pte)	
US8529763 BB	20120626	LSAS	AS	ASSIGNMENT	OWNER NAME : DEUTSCHE BANK TRUST COMPANY AMERICAS, AS COLLATERA DESCRIPTION : SECURITY AGREEMENT; ASSIGNOR:ANTICLINE DISPOSAL, LLC; REEL/FRAME:028442/0845 EFFECTIVE DATE : 20120619
US8790514 BB	20140729	LSGT	+	granted / extensions (spc, cpc, pte)	

Title: BALLAST WATER TREATMENT PLANT HAVING FILTER, DISINFECTION, INSTRUMENTATION AND CONTROL UNIT

Abstract: Source: US2010116647A Water treatment plant, in particular ballast water treatment plant, for removing sediments and/or removing and/or destroying living organisms, which has at least one filter unit (B) and at least one disinfection unit (C), wherein the plant has a detection unit (D) by means of which the number of living organisms of a presettable size per unit volume of water can be determined, and in that the plant has a control unit, by means of which the disinfection unit (C) can be controlled as a function of the number of living organisms which has been determined.

Classifications:

International (IPC 8-9): B01D36/00 B01D61/00 B04C5/28 B63B13/00 B63J4/00 C02F1/00 C02F1/28 C02F1/38 C02F1/44 C02F1/46 C02F1/467 C02F103/02 C02F9/00 C02F9/02 C02F9/12 C12Q1/00 G01N21/64 G01N33/18 (Advanced/Invention); C02F103/02 G01N33/18 (Advanced/Non-invention); B01D36/00 B01D61/00 B04C5/00 B63B13/00 C02F1/38 C02F1/44 C02F1/46 C02F1/461 G01N21/64 G01N33/18 (Core/Invention)

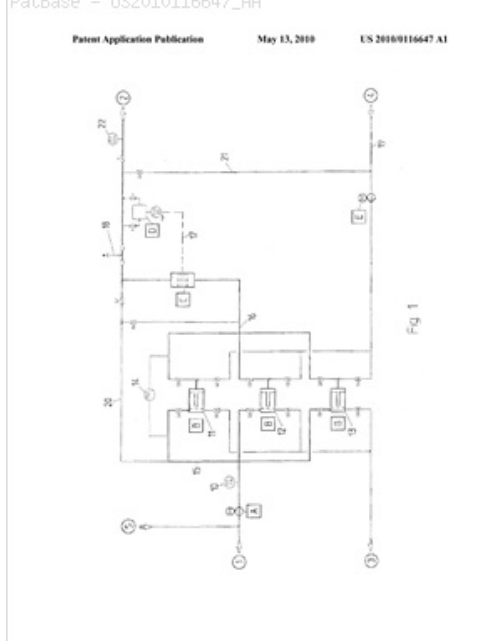
International (IPC 1-7): C02F1/38 C02F1/467

CPC: B63J4/004 C02F1/001 C02F1/008 C02F1/20 C02F1/38 C02F1/4674 C02F2103/008 C02F2209/008 C02F2209/03 C02F2209/29 C02F2209/40 C02F2301/043

European: B63J4/00S C02F1/00T M02F1/00D M02F1/20 M02F1/38 M02F1/467B2 M02F103/00S M02F209/00T4 M02F209/03 M02F209/29 M02F209/40 M02F301/04B

US: 204/228.1 204/228.100P 210/96.1 210/96.100S

PatBase - US2010116647_AA



Family:

Publication number	Publication date	Application number	Application date
AU2007302377 AA	20080403	AU20070302377	20070814
AU2007302377 BB	20101125	AU20070302377	20070814
CA2664182 AA	20090320	CA20072664182	20070814
CA2664182 C	20140715	CA20072664182	20070814
CN101484389 A	20090715	CN200780024850	20070814
DE102006045558 A1	20080403	DE200610045558	20060925
EP2066590 A1	20090610	EP20070786676	20070814
IN00987KN2009 A	20090522	IN2009KN00987	20090316
IN261500 B	20140704	IN2009KN00987	20090316
JP2010504209 T2	20100212	JP20090529550T	20070814
JP5358440 B2	20131204	JP20090529550T	20070814
KR101424778 B1	20140801	KR20097000321	20070814
KR20090060990 A	20090615	KR20097000321	20070814
RU2009115678 A	20101110	RU20090115678	20070814
RU2439000 C2	20120110	RU20090115678	20070814
TW200829514 A	20080716	TW20070130719	20070820
TWI423933 B	20140121	TW20070130719	20070820
US2010116647 AA	20100513	US20070442644	20070814
WO08037324 A1	20080403	WO2007EP07161	20070814

Priority:

DE200610045558 20060925 WO2007EP07161 20070814

Probable Assignee: RWO GMBH

Assignee(s): (std): KORNUELLER ANJA ; KORNUELLER ANJA ; RVO GMBKH ; RWO GMBH ; WERLE HELMUT ; WERLE HELMUT JOSEF

Assignee(s): RWO GMBH15 A THALENHORSTSTRASSE28307BREMENDE

Inventor(s): (std): KORNUELLER ANJA ; VERLE KHEL MUT ; WERLE HELMUT JOSEF ; WERLE HELMUT ; KORNUELLER ANJA ; KORNUELLER ANJA ; HELMUT WERLE ; ANJA KORNUELLER

Inventor(s): ANJA KORNUELLER ; VERLE KHEL'MUT ; WERLE HELMUTDE ; KORNUELLER ANJADE

Agent(s): GRIFFITH HACK; MARKS AND CLERK; LAW OFFICES OF ROBERT F ZIELINSKI LLC; COHAUSZ DAWIDOWICZ HANNIG AND SOZIEN

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)

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Patent	Date recorded	Event group	Code	Event	Details
AU2007302377 AA	20080403	LSPB	+	published / reissued	
AU2007302377 AA	20110324	LSGT	+FGA	LETTERS	

				PATENT SEALED OR GRANTED (STANDARD PATENT)	
AU2007302377 AA	20150312	LSLE	-MK14	PATENT CEASED SECTION 143(A) (ANNUAL FEES NOT PAID) OR EXPIRED	
AU2007302377 BB	20101125	LSGT	+	granted / extensions (spc, cpc, pte)	
CA2664182 AA	20090320	LSPB	+	published / reissued	
CA2664182 AA	20090320	LSNP	+AFNE	NATIONAL PHASE ENTRY	
CA2664182 AA	20100713	LSES	+EEER	EXAMINATION REQUEST	
CA2664182 AA	20100729	LSES	+EEER	EXAMINATION REQUEST	EFFECTIVE DATE : 20100713
CA2664182 AA	20150926	LSLE	-MKLA	LAPSED	EFFECTIVE DATE : 20150814
CA2664182 C	20140715	LSGT	+	granted / extensions (spc, cpc, pte)	
CN101484389 A	20090715	LSPB	+	published / reissued	
CN101484389 A	20090715	LSPB	+C06	PUBLICATION	
CN101484389 A	20150902	LSDW	-C05	DEEMED WITHDRAWAL (PATENT LAW BEFORE 1993)	
CN101484389 A	20160311	LSWD	REG	REFERENCE TO A NATIONAL CODE	REF COUNTRY CODE : HK REF LEGAL EVENT CODE : WD REF DOCUMENT NUMBER : 1130760 COUNTRY OF REF DOCUMENT : HK
DE102006045558 A1	20080403	LSPB	+	published / reissued	
DE102006045558 A1	20080403	LSES	+OM8	SEARCH REPORT AVAILABLE AS TO PARAGRAPH 43 LIT. 1 SENTENCE 1 PATENT LAW	
DE102006045558 A1	20130613	LSES	+R012	REQUEST FOR EXAMINATION VALIDLY FILED	EFFECTIVE DATE : 20130416
DE102006045558 A1	20150401	LSDW	-R119	APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON- PAYMENT OF RENEWAL FEE	
DE102006045558 A1	20150625	LSDW	-R119	APPLICATION DEEMED WITHDRAWN, OR IP RIGHT LAPSED, DUE TO NON- PAYMENT OF RENEWAL FEE	EFFECTIVE DATE : 20150401
EP2066590 A1	20090610	LSPB	+	published / reissued	
EP2066590 A1	20090610	LSES	+17P	REQUEST FOR EXAMINATION FILED	EFFECTIVE DATE : 20081106
EP2066590 A1	20091028	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : WERLE, HELMUT
EP2066590 A1	20091028	LSRE	RIN1	INVENTOR (CORRECTION)	INVENTOR NAME : KORNUELLER, ANJA
EP2066590 A1	20111026	LSES	+17Q	FIRST EXAMINATION REPORT	EFFECTIVE DATE : 20110923
EP2066590 A1	20150805	LSDW	-18D	DEEMED TO BE WITHDRAWN	EFFECTIVE DATE : 20150303
IN00987KN2009 A	20090522	LSPB	+	published / reissued	
IN261500 B	20140704	LSGT	+	granted /	

				extensions (spc, cpc, pte)	
JP2010504209 T2	20100212	LSPB	+	published / reissued	
JP2010504209 T2	20100616	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20100615
JP2010504209 T2	20120418	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120417
JP2010504209 T2	20121016	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20121015
JP2010504209 T2	20130501	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130430
JP2010504209 T2	20130510	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20130509
JP2010504209 T2	20130820	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP2010504209 T2	20130828	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20130827
JP2010504209 T2	20130905	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20130902
JP2010504209 T2	20130906	LSGT	+R150	CERTIFICATE OF PATENT OR REGISTRATION OF UTILITY MODEL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150
JP5358440 B2	20131204	LSGT	+	granted / extensions (spc, cpc, pte)	
JP5358440 B2	20100616	LSES	+A621	WRITTEN REQUEST FOR APPLICATION EXAMINATION	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A621 EFFECTIVE DATE : 20100615
JP5358440 B2	20120418	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20120417
JP5358440 B2	20121016	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20121015
JP5358440 B2	20130501	LSES	-A131	NOTIFICATION OF REASONS FOR REFUSAL	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A131 EFFECTIVE DATE : 20130430
JP5358440 B2	20130510	LSRE	A521	WRITTEN AMENDMENT	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A523 EFFECTIVE DATE : 20130509
JP5358440 B2	20130820	LSGT	+TRDD	DECISION OF GRANT OR REJECTION WRITTEN	
JP5358440 B2	20130828	LSGT	+A01	WRITTEN DECISION TO GRANT A PATENT OR TO GRANT A REGISTRATION (UTILITY MODEL)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A01 EFFECTIVE DATE : 20130827
JP5358440 B2	20130905	LSFE	+A61	FIRST PAYMENT OF ANNUAL FEES (DURING GRANT PROCEDURE)	DESCRIPTION : JAPANESE INTERMEDIATE CODE: A61 EFFECTIVE DATE : 20130902
JP5358440 B2	20130906	LSGT	+R150	CERTIFICATE OF PATENT OR	DESCRIPTION : JAPANESE INTERMEDIATE CODE: R150

KR101424778 B1	20140801	LSGT	+	REGISTRATION OF UTILITY MODEL granted / extensions (spc, cpc, pte)	
KR101424778 B1	20140723	LSGT	+GRNT	WRITTEN DECISION TO GRANT	
KR20090060990 A	20090615	LSPB	+	published / reissued	
RU2009115678 A	20101110	LSPB	+	published / reissued	
RU2439000 C2	20120110	LSGT	+	granted / extensions (spc, cpc, pte)	
RU2439000 C2	20150627	LSLE	-MM4A	THE PATENT IS INVALID DUE TO NON- PAYMENT OF FEES	EFFECTIVE DATE : 20140815
TW200829514 A	20080716	LSPB	+	published / reissued	
TWI423933 B	20140121	LSGT	+	granted / extensions (spc, cpc, pte)	
TWI423933 B	20151021	LSLE	-MM4A	ANNULMENT OR LAPSE OF PATENT DUE TO NON-PAYMENT OF FEES	
US2010116647 AA	20100513	LSPB	+	published / reissued	
US2010116647 AA	20100106	LSAS	AS	ASSIGNMENT	OWNER NAME : RWO GMBH,GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KORNMUELLER, ANJA; WERLE, HELMUT; SIGNED BETWEEN 20090216 AND 20090218; US- ASSIGNMENT DATABASE UPDATED:20100513; REEL/FRAME:23739/109
US2010116647 AA	20100106	LSAS	AS	ASSIGNMENT	OWNER NAME : RWO GMBH,GERMANY DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:KORNMUELLER, ANJA; WERLE, HELMUT; SIGNING DATES FROM 20090216 TO 20090218; REEL/FRAME:023739/0109
WO08037324 A1	20080403	LSPB	+	published / reissued	
WO08037324 A1	20090116	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 2007302377 COUNTRY OF REF DOCUMENT : AU
WO08037324 A1	20090212	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2007302377 COUNTRY OF REF DOCUMENT : AU DATE OF REF DOCUMENT : 20070814 KIND CODE OF REF DOCUMENT : A
WO08037324 A1	20090320	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2664182 COUNTRY OF REF DOCUMENT : CA
WO08037324 A1	20090325	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009529550 COUNTRY OF REF DOCUMENT : JP KIND CODE OF REF DOCUMENT : A
WO08037324 A1	20090427	LSNP	ENP	ENTRY INTO THE NATIONAL PHASE IN:	REF DOCUMENT NUMBER : 2009115678 COUNTRY OF REF DOCUMENT : RU KIND CODE OF REF DOCUMENT : A
WO08037324 A1	20100106	LSNP	+WWE	WIPO INFORMATION: ENTRY INTO NATIONAL PHASE	REF DOCUMENT NUMBER : 12442644 COUNTRY OF REF DOCUMENT : US

Title: MULTISTAGE FILTRATING PRE-TREATMENT FOR DESALINATION OF OILFIELD PRODUCED WATER

Abstract: Source: US2014332473A A method and system for treating oilfield produced water is disclosed. The method includes passing oilfield produced water through a chain of filters, first filter configured to filter particles of a size larger than 10 micro m from the water, a second filter configured to filter remaining particles of a size larger than 2 micro m from the water and a third filter configured to filter remaining particles of a size larger than 0.5 micro m from the water and automatically cleaning at least one of the filters.

Classifications:

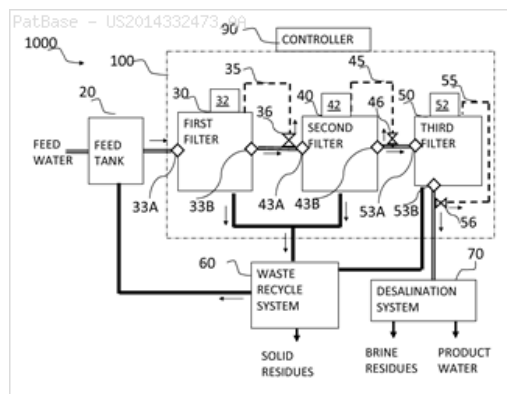
International (IPC 8-9): B01D29/56 B01D29/60 B01D29/64

C02F1/00 (Advanced/Invention)

CPC: C02F1/004 C02F1/008 C02F1/441 C02F1/444 C02F2101/32

C02F2103/365 C02F2301/08 C02F2303/16

US: 210/106 210/107 210/741



Family:

Publication number	Publication date	Application number	Application date
US2014332473 AA	20141113	US20140270692	20140506

Priority:

US20130821566P 20130509

US20140270692 20140506

Probable Assignee:

RWL WATER ISRAEL LTD

Assignee(s): (std):

NIROSOFT IND LTD

Assignee(s):

RWL WATER ISRAEL LTD

Inventor(s): (std):

HABERMAN ASSAF ; LEVY RAVID

Legal status (INPADOC)

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Patent	Date recorded	Event group	Code	Event	Details
US2014332473 AA	20141113	LSPB	+	published / reissued	
US2014332473 AA	20140825	LSAS	AS	ASSIGNMENT	OWNER NAME : NIROSOFT INDUSTRIES LTD., ISRAEL DESCRIPTION : ASSIGNMENT OF ASSIGNORS INTEREST; ASSIGNORS:HABERMAN, ASSAF; LEVY, RAVID; REEL/FRAME:033597/0894 EFFECTIVE DATE : 20140602
US2014332473 AA	20160703	LSAS	AS	ASSIGNMENT	OWNER NAME : RWL WATER ISRAEL LTD, ISRAEL DESCRIPTION : CHANGE OF NAME; ASSIGNOR:NIROSOFT INDUSTRIES LTD.; REEL/FRAME:039242/0041 EFFECTIVE DATE : 20151208