

NC2016/0000465
1er examen de fondo.

Search history

Search PN=(WO2015108851) (Results 1)

1:

Search [SP]: cross-reference to related application [0001] this patent application claims the benefit of priority to u.s. provisional patent application no. 61/927,881, filed jan. 15, 2014, and entitled, "foam injection system with variable port inserts for slurry mixing and dispensing apparatus," which is incorporated in its entirety herein by this reference. background [0002] the present disclosure relates to continuous board manufacturing processes and, more particularly, to a system and method for the introduction of aqueous foam into a cementitious slurry in connection with the manufacture of a cementitious article.[0003] in many types of cementitious articles, set gypsum (calcium sulfate dihydrate) is often a major constituent. for example, set gypsum is a major component of end products created by use of traditional plasters (e.g., plaster-surfaced internal building walls), and also in faced gypsum board employed in typical drywall construction of interior walls and ceilings of buildings. in addition, set gypsum is the major component of gypsum/cellulose fiber composite boards and products, as described in u.s. pat. no. 5,320,677. also, many specialty materials, such as materials useful for modeling and mold-making that are precisely machined, produce products that contain major amounts of set gypsum. typically, such gypsum-containing cementitious products are made by preparing a mixture of calcined gypsum (calcium sulfate alpha or beta hemihydrate and/or calcium sulfate anhydrite), water, aqueous foam, and other components, as appropriate to form foamed cementitious slurry. in the manufacture of cementitious articles, the cementitious slurry and desired additives are often blended in a continuous mixer, as for example described in u.s. pat. no. 3,359,146. [0004] for example, in a typical manufacturing process, gypsum board is produced by uniformly dispersing calcined gypsum (commonly referred to as "stucco") in water to form aqueous calcined gypsum slurry. the aqueous calcined gypsum slurry is typically produced in a continuous manner by inserting stucco and water and other additives into a mixer which contains means for agitating the contents to form a uniform gypsum slurry. the slurry is continuously directed toward and through a discharge outlet of the mixer and into a discharge conduit connected to the discharge outlet of the mixer. aqueous foam can be combined with the aqueous calcined gypsum slurry in the mixer and/or in the discharge conduit. the stream of foamed slurry passes through the discharge conduit from which it is continuously deposited onto a moving web of cover sheet material supported by a forming table.[0005] the foamed slurry is allowed to spread over the advancing web. a second web of cover sheet material is applied to cover the foamed slurry and form a sandwich structure of a continuous wallboard preform, which is subjected to forming, such as at a conventional forming station, to obtain a desired thickness.[0006] the calcined gypsum reacts with the water in the wallboard preform and sets as a conveyor moves the wallboard preform down a manufacturing line. the wallboard preform is cut into segments at a point along the line where the preform has set sufficiently. the segments are flipped over, dried (e.g., in a kiln) to drive off excess water, and processed to provide the final wallboard product of desired dimensions. the aqueous foam produces air voids in the set gypsum, thereby reducing the density of the finished product relative to a product made using a similar slurry but without foam.[0007] prior devices and methods for addressing some of the operational problems associated with the production of gypsum wallboard are disclosed in commonly-assigned u.s. pat. nos. 5,683,635 5,643,510 6,494,609 6,874,930 7,007,914 and 7,296,919, which are incorporated by reference.[0008] in conventional arrangements, aqueous foam is injected into the cementitious slurry through a foam block or body having one or more fixed ports with a specifically-sized orifice. if it is desired to vary the size of the orifice (e.g., to change the pressure of the foam flowing through the foam port), the entire foam block must be removed and replaced with a different foam block with a port or ports having an orifice with a different size. this approach can be costly and can consume a fairly large amount of time to accomplish.[0009] it will be appreciated that this background description has been created by the inventors to aid the reader and is not to be taken as an indication that any of the indicated problems were themselves appreciated in the art. while the described principles can, in some aspects and embodiments, alleviate the problems inherent in other systems, it will be appreciated that the scope of the protected innovation is defined by the attached claims and not by the ability of any disclosed feature to solve any specific problem noted herein. summary [0010] in one aspect, the present disclosure is directed to embodiments of a foam injection system for use in preparing a cementitious product. in embodiments, a foam injection system can be a part of a cementitious slurry mixing and dispensing assembly and used to inject foam into a flow of cementitious slurry produced in the assembly.[0011] in one embodiment, a foam injection system includes a foam injection body, a first port insert, and a second port insert. the foam injection body defines a slurry passageway and a port passageway. the port passageway has a port opening in fluid communication with the slurry passageway. the first port insert defines a first foam passageway having a first orifice with a first orifice size. the first port insert is adapted to removably mount to the foam injection body such that the first foam passageway is in fluid communication with the slurry passageway via the port opening of the port passageway. the second port insert defines a second foam passageway having a second orifice with a second orifice size. the second port insert is also adapted to removably mount to the foam injection body such that the second foam passageway is in fluid communication with the slurry passageway via the port opening of the port passageway. the second orifice size is different than the first orifice size.[0012] in another aspect of the present disclosure, embodiments of a slurry mixing and dispensing assembly are described. in one embodiment, a slurry mixing and dispensing assembly includes a mixer, a slurry discharge conduit, and a foam injection system.[0013] the mixer is adapted to agitate water and a cementitious material to form aqueous cementitious slurry. the slurry discharge conduit is in fluid communication with the mixer.[0014] the foam injection system is arranged with at least one of the mixer and the slurry discharge conduit. the foam injection system includes a foam injection body, a first port insert, and a second port insert.[0015] the foam injection body comprises a part of at least one of the mixer and the slurry discharge conduit. the foam injection body defines a slurry passageway and a port passageway. the slurry passageway is configured to convey cementitious slurry therethrough. the port passageway has a port opening in fluid communication with the slurry passageway.[0016] the first port insert defines a first foam passageway having a first orifice with a first orifice size. the first port insert is adapted to removably mount to the foam injection body such that the first foam passageway is in fluid communication with the slurry passageway via the port opening of the port passageway.[0017] the second port insert defines a second foam passageway having a second orifice with a second orifice size. the second port insert is adapted to removably mount to the foam injection body such that the second foam passageway is in fluid communication with the slurry passageway via the port opening of the port passageway. the second orifice size is different than the first orifice size.[0018] in another aspect of the present disclosure, embodiments of a method of preparing a cementitious product are described. in one embodiment of a method of preparing a cementitious product, a flow of aqueous foam is conveyed to a first foam passageway of a first port insert, which is removably mounted to a foam injection body. the foam injection body defines a slurry passageway and a port passageway. the port passageway has a port opening in fluid communication with the slurry passageway. the first port insert is removably mounted to the foam injection body such that the first foam passageway is in fluid communication with the slurry passageway via the port opening of the port passageway. the flow of aqueous foam in the first foam passageway of the first port insert is injected under a first flow condition into a flow of aqueous cementitious slurry passing through the slurry passageway to form a flow of foamed cementitious slurry.[0019] further and alternative aspects and features of the disclosed principles will be appreciated from the following detailed description and the accompanying drawings. as will be appreciated, the foam injection systems and techniques disclosed herein are capable of being carried out and used in other and different embodiments, and capable of being modified in various respects. accordingly, it is to be understood that both the foregoing general description and the following detailed description are exemplary and explanatory only and do not restrict the scope of the appended claims. brief description of the drawings [0020] fig. 1 is a perspective view of an embodiment of a foam port insert suitable for use in an embodiment of a foam injection system of a cementitious slurry mixing and dispensing assembly (Results 22)

Search 2 and foam (Results 19)

3:

Search foam and (device or apparatus) and (passage or way or path or duct or diameter or pip*) (Results 279773)

4:

Search 4 and first and second (Results 194649)

5:

Search 5 and (port or discharge or opening or entr* or diameter or orifice) (Results 170917)

6:

Search 6 and (port or orifice or opening) (Results 112165)

7:

Search 7 and fluid and (inject* or insert* or introduc*) (Results 44571)

8:

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14:
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Search 17 and supply and mix* (Results 78)
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19:
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31:

Title: IMPROVED METHOD FOR COMBINING A BITUMINOUS BINDER WITH AN AGGREGATE

Abstract: Source: GB879692A 879,692. Mixing appliances. IOWA STATE COLLEGE RESEARCH FOUNDATION. April 10, 1958, No. 11468/58. Class 86 [Also in Groups V and X] In combining a bituminous binder with aggregate, the binder is **first** foamed by pouring it in a continuous stream under a controlled pressure, through a flow chamber 30, Fig. 2, within a nozzle 24 and continuously injecting steam at a controlled pressure, and volume through a conduit 33 into the stream of binder, the foamed binder being then **discharged** through the nozzle **orifice** 31, either on to the aggregate in a mixing unit, such as that shown in Fig. 1, or directly on to the ground, as in a soil-stabilizing machine Fig. 5 (see Group X). In Fig. 1, the foamed binder issues from nozzles 24 supplied through a spray bar unit 21. The binder is mixed with the aggregate by means of paddles mounted on contra-rotating shafts 12, 13 the paddles having either solid plate tips 16 or mesh tips 16¹ (see Fig. 3, not shown).

Classifications:

International (IPC 8-9): B01F7/02 C08L95/00

E01C19/10 (Advanced/Invention);

B01F7/00 (Advanced/Non-invention);

B01F7/02 C08L95/00 E01C19/02 (Core/Invention);

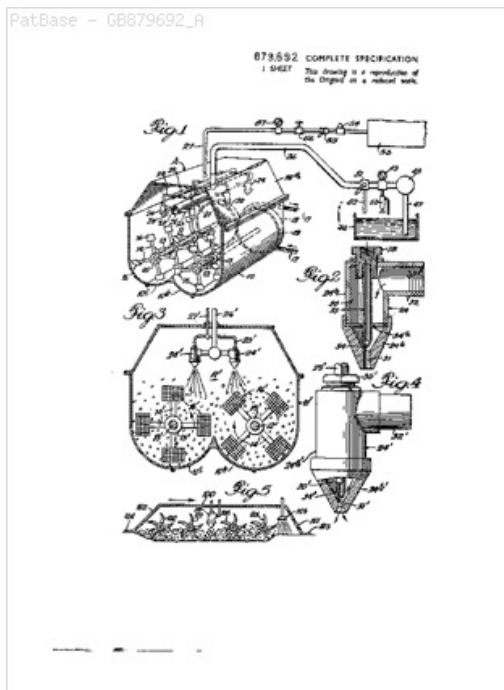
B01F7/00 (Core/Non-invention)

International (IPC 1-7): C08L95/00 E01C19/10

CPC: E01C19/104 E01C19/105 B01F7/0025 B01F7/022 C08L95/00

European: B01F7/02B C08L95/00 E01C19/10D10 L01F7/00B16B

PatBase - GB879692_A



Family:

Publication number	Publication date	Application number	Application date
GB879692 A	19611011	GB19580011468	19580410

Priority:

GB19580011468 19580410

Probable Assignee: IOWA STATE COLLEGE RES FOUND

Assignee(s): (std): IOWA STATE COLLEGE RES FOUND

Assignee(s): IOWA STATE COLLEGE RESEARCH FOUNDATION

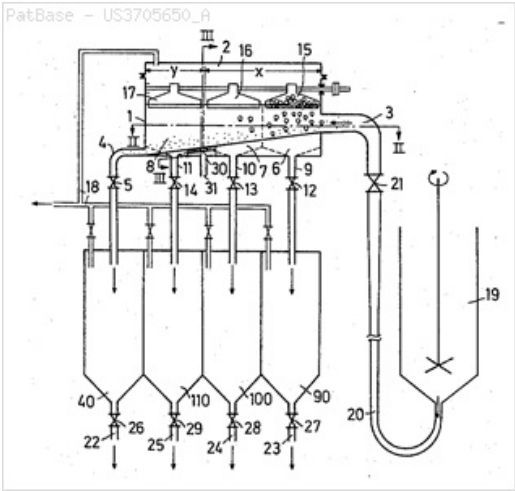
Inventor(s): (std): CSANYI LADIS HENRY

Title: VACUUM FLOTATION **DEVICE**

Abstract: Source: US3705650A A vacuum foam flotation **apparatus** for treatment of turbid liquids in which the liquids flow in a trough in an evacuated housing, while conveying means move laterally of the trough and displace foam from the surface of the liquid in the trough into foam pockets arranged along the side of the trough. At least the **first portion** of the trough has laminar liquid flow therein, while agitating means may be provided to agitate the liquid in the trough beyond the region of laminar flow.

Classifications:

International (IPC 8-9): B03D1/04 B03D1/26 (Advanced/Invention);
B03D1/00 B03D1/14 (Core/Invention)
International (IPC 1-7): B01D21/24 B01D43/00 B03D1/00 B03D1/04
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CPC: B03D1/16 B03D1/1431 B03D1/1406 B03D1/1456 B03D1/1462
B03D1/1481 B03D1/1493 B03D1/028 B03D1/04
European: B03D1/04 B03D1/14D
US: 210/221 210/221.1 210/322



Family:

Publication number	Publication date	Application number	Application date
DE1956530 B1	19710616	DE19691956530	19691111
DE2039871 B1	19711104	DE19702039871	19700811
FR2109518 A5	19720526	FR19700040694	19701113
GB1325477 A	19730801	GB19700053728	19701111
US3705650 A	19721212	US19700087879	19701109

Priority:

DE19691956530 19691111 DE19702039871 19700811

Probable Assignee: GOETTE A

Assignee(s): (std): AUGUST GOTTE ; GOETTE A ; GOETTE AUGUST PROF DR ING HABI ; GOTTE AUGUST
Assignee(s): GOETTE AUGUST PROF DR ING HABIL DR ING E H ; GOETTE AUGUST PROFDR INGHABILDR INGEH
Inventor(s): (std): GOETTE AUGUST PROF DR ING HABI ; GOTTE AUGUST
Inventor(s): AUGUST GOTTE ; GOETTE AUGUST PROF DR ING HABIL DR ING E H ; GOETTE AUGUST PROFDR INGHABILDR INGEH

Title: HOLLOW SPHERES CONSISTING OF ALKALI METAL SILICATE AND A POLYSALT

Abstract: Source: US3794503A ABSTRACT OF THE DISCLOSURE The invention relates to a process for the manufacture of an economical filler of low bulk density that is especially useful for incorporation in unsaturated polyester systems and which does not react with the components of the unsaturated polyester system. Solutions of sodium silicate and inorganic polysalts are mixed, spray dried, and the product from the spray drier is then further dried to a water content below about 7 percent.

Classifications:

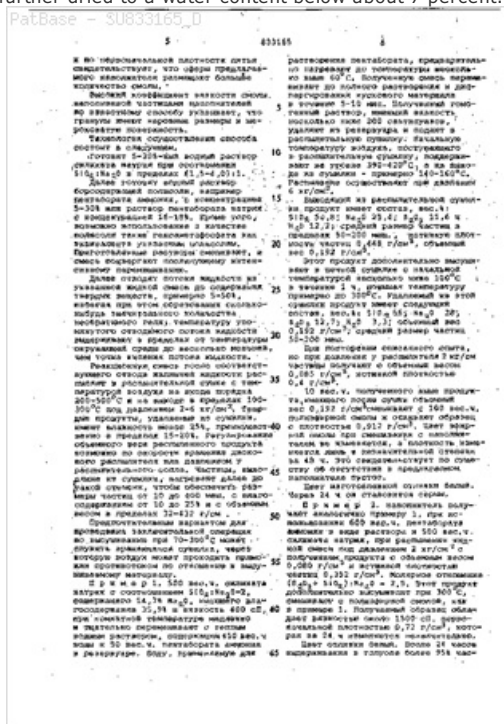
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International (IPC 1-7): B01J2/02 B01J2/04 C01B33/32 C04B21/08 C04B31/02 C08H17/02 C08K1/02 C08K3/34 C08K3/36 C08K7/24 C09C1/00 C09C1/28

CPC: B01J2/04 C08K7/26 Y10T428/2991

European: B01J2/04 C08K7/26

US: 106/28.8B 106/409 106/482 106/601 23/313AS 264/13 428/403



Family:

Publication number	Publication date	Application number	Application date
CA998205 A1	19761012	CA19730162611	19730201
DE2305210 A1	19730809	DE19732305210	19730202
DE2305210 C2	19871223	DE19732305210	19730202
FR2170172 A1	19730914	FR19730003646	19730202
FR2170172 B1	19770204	FR19730003646	19730202
GB1426801 A	19760303	GB19730005555	19730205
GB1426802 A	19760303	GB19750037192	19730205
IT991544 A	19750830	IT19730067218	19730202
JP1166030 C3	19830908	JP19730009606	19730124
JP4084827 A2	19731110	JP19730009606	19730124
JP57061703 B4	19821225	JP19730009606	19730124
SU833165 D	19810523	SU19731886151	19730202
US3794503 A	19740226	US19720252763	19720512
US3796777 A	19740312	US19720223313	19720203
US3888957 A	19750610	US19720235851	19720317

Priority:

US19720223313 19720203 US19720223314 19720203 US19720252763 19720512
US19720232743 19720512 US19720235851 19720317

Probable Assignee: PHILADELPHIA QUARTZ CO

Assignee(s): (std): PHILADELPHIA QUARTZ CO ; PQ CORP

Assignee(s): PQ CORP PHILADELPHIA PA US ; FILADELFIYA KVARTS KOMPANI FA ; NETTING DAVID I ; PHILADELPHIA QUARTZ CO PHILADELPHIA PA V ST A ; PHILADELPHIA QUARTZ CO US ; PHILADELPHIA QUARTZ COMPANY ; PHILADELPHIA QUARTZ CY ; PHILADELPHIA QUARTZ CY US ; PHILADELPHIA QUARTZ CO

Inventor(s): (std): NETTING D ; NETTING DAVID I ; NETTING DAVID J ; NETTING DEVID I

Inventor(s): NETTING DAVID J SPRINGFIELD PA V ST A ; NETTING DAVID I SPRINGFIELD PA US ; NETTING D US ; DEBIDO AI NETSUTEINGU ; DEVID I NETTING US

Title: FOAM GENERATING FIRE FIGHTING **DEVICE**

Abstract: Source: US4318443A An **apparatus** (10) for generating and discharging foam is provided. **Apparatus** (10) includes a container (12) for receiving and storing a foam generating solution (24). A **discharge** tube (66) is connected to container (12). An ejector tube (32) is disposed within container (12) for discharging the foam generating solution (24) to the **discharge** tube (66). Foam generating **structure** (34) is disposed between the ejector tube (32) and the **discharge** tube (66) exterior of the container (12) and includes a chamber (74) communicating with ejector tube (32) for permitting the **passage** of the foam generating solution (24) therethrough to the **discharge** tube (66). A pressure source (52) communicates with the container (12) for forcing the foam generating solution (24) through the ejector tube (32) and the foam generating **structure** (34). The pressure source (52) further communicates with the chamber (74) for aerating the foam generating solution (24) prior to flowing through the **discharge** tube (66).

Classifications:

International (IPC 8-9): A62C13/66 B01F5/04 (Advanced/Invention);
A62C13/00 B01F5/04 (Core/Invention)

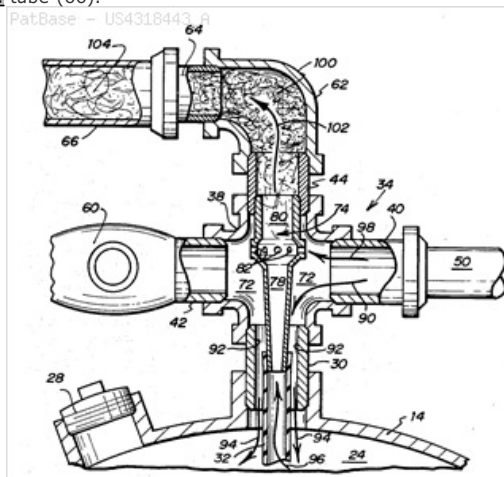
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CPC: A62C13/66 B01F5/0408 Y10S261/26

European: A62C13/66 B01F5/04C11B2

US: 166/309 169/15 175/69 239/366 261/DIG.26



Family:

Publication number	Publication date	Application number	Application date
AU197949790 A1	19800306	AU19790049790	19790810
AU530865 B2	19830804	AU19790049790	19790810
CA1119565 A1	19820309	CA19790333696	19790814
GB2031724 A1	19800430	GB19790028155	19790813
GB2031724 B2	19830106	GB19790028155	19790813
US4318443 A	19820309	US19800181716	19800827
US4457375 A	19840703	US19820355136	19820305

Priority:

CA19790333696 19790814 US19780933595 19780814 US19820355136 19820305
US19810181716 19810827 US19800181716 19800827

Probable Assignee: CUMMINS M A

Assignee(s): (std): CUMMINS MARK A ; CUMMINS M A

Assignee(s): CUMMINS MA ; WATER EXPANSION SYSTEMS INC ; WATER EXPANSION SYSTEMS INC A CORP OF TX

Inventor(s): (std): CUMMINS MARK ALAN ; CUMMINS MARK A

Inventor(s): MARK ALAN CUMMINS

Agent(s): KIRBY EADES GALE BAKER

Title: MOBILE TRAIN FOR BACKFILLING TUNNEL LINERS WITH **CEMENT** GROUT

Abstract: Source: US5141363A A mobile train for mixing foamed **cement** grout within a tunnel and injecting the grout into the annular cavity between the tunnel bore and liner. **Cement slurry** is supplied to the train through a conduit from a remote mixing plant, and finished foam is formed by a foam generator on the train and mixed with the **cement slurry** to form the foamed **cement** grout. The train is movable longitudinally through the tunnel so that the liner can be grouted in segments while at the same time avoiding the need to pump the foamed **cement** grout over excessively long distance. The train is made up of several wheeled cars which are pulled through the tunnel by a tractor.

Classifications:

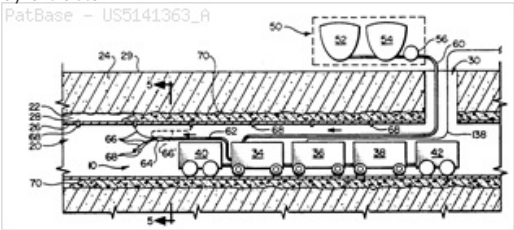
International (IPC 8-9): B28C5/38 E21D11/10 (Advanced/Invention); B28C5/00 E21D11/10 (Core/Invention)

International (IPC 1-7): B28C5/38 E02D29/00 E21D11/10

CPC: C04B28/02 C04B2111/00724 C04B2111/70 B28C5/386 E21D11/105 Y02W30/92 E04G21/0472

European: B28C5/38B4 E21D11/10C

US: 366/10 366/3 366/51 405/146 405/150.1 405/150.2 405/156 405/267

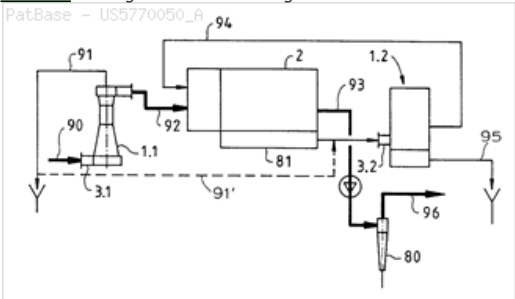


Title: FLOTATION APPARATUS

Abstract: Source: US5770050A An apparatus for selective particle flotation includes a static mixer connected to a flotation section in lieu thereof of the apparatus. The static mixer is disposed upstream of the flotation section in lieu thereof with respect to a direction of fluid flow through the apparatus. The static mixer mixes sludge with small gas bubbles. A flotation cyclone is disposed in an upstream portion of the flotation section in lieu thereof with respect to the direction of fluid flow through the apparatus. The flotation cyclone is the initial separation device through which the sludge flows.

Classifications:

International (ipc 8-9): B01F5/04 B01F5/06 B03D1/14 B03D1/24 B04C5/081 D21B1/32 D21F1/70 (Advanced/Invention); B01F5/04 B01F5/06 B03D1/14 B04C5/00 D21B1/00 D21F1/66 (Core/Invention)
International (ipc 1-7): B01F5/04 B03D1/02 B03D1/14 B03D1/24 B04C3/00 B04C3/06 D21C5/02 D21F1/70
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US: 162/4 209/170 209/725 209/734 210/221.2 210/512.1



Family:

Publication number	Publication date	Application number	Application date
AT205751 E	20011015	AT19950110380T	19950704
DE4426159 A1	19941208	DE19944426159	19940722
DE59509604 D1	20011025	DE19955009604	19950704
EP0693318 A1	19960124	EP19950110380	19950704
EP0693318 B1	20010919	EP19950110380	19950704
FI953522 A	19960123	FI19950003522	19950721
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US5770050 A	19980623	US19950505019	19950721

Priority:

DE19944426159 19940722 DE19955009604 19950704

Probable Assignee: VOITH SULZER STOFFAUFBEREITUNG GMBH

Assignee(s): (std): VOITH GMBH ; VOITH GMBH J M ; VOITH SULZER STOFFAUFBEREITUNG

Assignee(s): VOITH SULZER STOFFAUFBEREITUNG GMBH ; J M VOITH GMBH ; J M VOITH GMBH 89522 HEIDENHEIM DE ; JM VOITH GMBH 89522 HEIDENHEIM DE

Inventor(s): (std): DOERFLINGER HANS DIE ; DOERFLINGER HANS DIETER ; MARTIN THOMAS ; TREFZ DR ; TREFZ MICHAEL ; TREFZ MICHAEL DR

Inventor(s): MARTIN THOMAS 89129 LANGENAU DE ; DOERFLINGER HANS DIETER 89518 HEIDENHEIM DE

Designated states: AT DE FR GB SE

Title: **APPARATUS** FOR PREPARING A GYPSUM WALLBOARD CORE

Abstract: Source: US2004131714A A gypsum wallboard core, and methods and **apparatus** for making the same are disclosed. Methods of making a gypsum wallboard core include extruding a gypsum **slurry** containing water, gypsum, slip agents, water-reducing agents, surfactants and, optional additives, through a die and onto a substantially flat, smooth, moving surface. The die has provisions at its outer sides for the introduction of slip agents into the **slurry**, and provisions at its lateral outer edges for the introduction of a strength-enhancing agent. Once extruded onto the conveyor belt, the **slurry** is chemically-activated to set and form a hardened board core which then may be easily removed from the conveyor belt and dried.

Classifications:

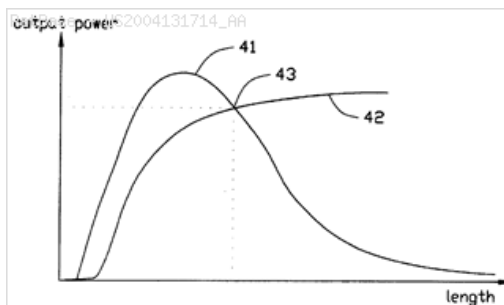
International (IPC 8-9): B28B11/24 B28B13/00 B28B3/20 B28B5/02 B29C47/14 C04B28/14 C04B40/00 (Advanced/Invention); B28B11/00 B28B13/00 B28B3/20 B28B5/00 C04B28/00 C04B40/00 (Core/Invention)

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European: B28B11/24 B28B3/20 B28B5/02C2 C04B28/14 C04B40/00D M04B111/00M14 M04B111/00T6B

US: 156/41 264/177.2 264/211 264/211.11 264/426 264/474 264/75 425/113 425/113P 425/131 425/131.1 425/133.5 425/208 425/208S 425/376.1 425/377 425/445 425/462 425/466 425/4R



Family:

Publication number	Publication date	Application number	Application date
AU200050110 A1	20010102	AU20000050110	20000510
AU200050110 A5	20010102	AU20000050110D	20000510
CA2374544 AA	20011213	CA20002374544	20000510
EP1185485 A1	20020313	EP20000932382	20000510
MXPA01013088 A1	20020820	MX2001PA13088	20000510
US2004131714 AA	20040708	US20040707761	20040109
US6699426 BA	20040302	US20000569981	20000510
US7172403 BB	20070206	US20040707761	20040109
WO0076937 A1	20001221	WO2000US13145	20000510

Priority:

US19990139183P 19990615 US19990147801P 19990809 US20040707761 20040109
US20000569981 20000510 WO2000US13145 20000510

Probable Assignee: NAT GYPSUM PROPERTIES LLC

Assignee(s): (std): NAT GYPSUM PROPERTIES LLC ; NATIONAL GYPSUM PROPERTIES LLC

Assignee(s): NEW NGC INC D B A NATIONAL GYPSUM CO ; NEW NGC INC ; BANK OF AMERICA NA ; BANK OF AMERICA NA AS COLLATERAL AGENT ; BANK OF AMERICA NA COLLATERAL AGENT AS ; BURKE WILLIAM ROY

Inventor(s): (std): BURKE W ROY ; BURKE WILLIAM ROY

Inventor(s): WILLIAM ROY BURKE

Agent(s): FINLAYSON AND SINGLEHURST; ICE MILLER LLP

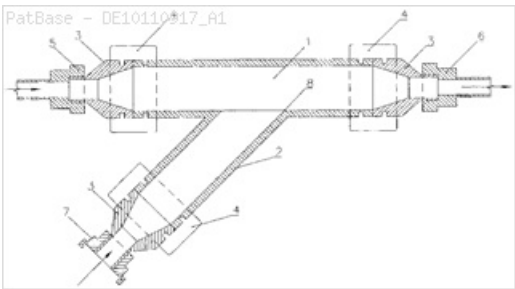
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Title: Foaming **cement** from gas and aqueous suspension mixes these frictionally within end-tapered chamber fed axially with gas at greater speed than suspension led in at angle.

Abstract: Gas is fed axially into the mixing chamber (1) at 80-250 times the rate at which the aqueous suspension enters the chamber prior to their conjoint **discharge**. The chamber (1) presents a center part conically terminated both ends plus connection (5,6) respectively for gas input and output to the foam line. A tube (3) into the chamber casing is of chamber center part **diameter** and terminates at its outward end in cone (7) for the suspension input. The tube comes in at an acute angle in relation to the air flowing centrally through the chamber.

Classifications:

International (IPC 8-9): B01F3/04 B01F5/04 B01F5/06
B28C5/06 (Advanced/Invention);
B01F15/00 (Advanced/Non-invention);
B01F3/04 B01F5/04 B01F5/06 B28C5/00 (Core/Invention);
B01F15/00 (Core/Non-invention)
International (IPC 1-7): B01F5/00 B28C5/06 C04B38/00 C04B38/10
CPC: B01F3/04446 B01F5/0403 B01F5/0646 B01F5/0654
B01F15/00123 B01F15/0037 B28C5/06
European: B01F15/00K60J1 B01F3/04C3 B01F5/04C B01F5/06B3F
B01F5/06B3F14 B28C5/06 L01F15/00K



Family:

Publication number	Publication date	Application number	Application date
DE10110917 A1	20021002	DE20011010917	20010307
DE10110917 C2	20030515	DE20011010917	20010307

Priority:

DE20011010917 20010307

Probable Assignee: KRETZSCHMAR AXEL
Assignee(s): (std): KRETZSCHMAR AXEL ; MEISNER ANNETT
Inventor(s): (std): BUNGE JOERG ; KRETZSCHMAR AXEL ; MEISNER ANNETT

Title: FLOTATION **DEVICE** FOR SEPARATING MINERALS FROM SAND

Abstract: Source: EP1518606A2 A flotation **device** for separating minerals from sand, which flotation **device** has a flotation basin containing flotation **fluid** for the sand to be treated. The flotation basin (1) is elongated in shape and narrows downwards, and at the bottom thereof, there is a conveyor screw (3) for conveying sand and the minerals contained therein in the longitudinal direction of the flotation basin, and a **discharge** channel (6) for removing the treated sand from the flotation basin in a continuous process.

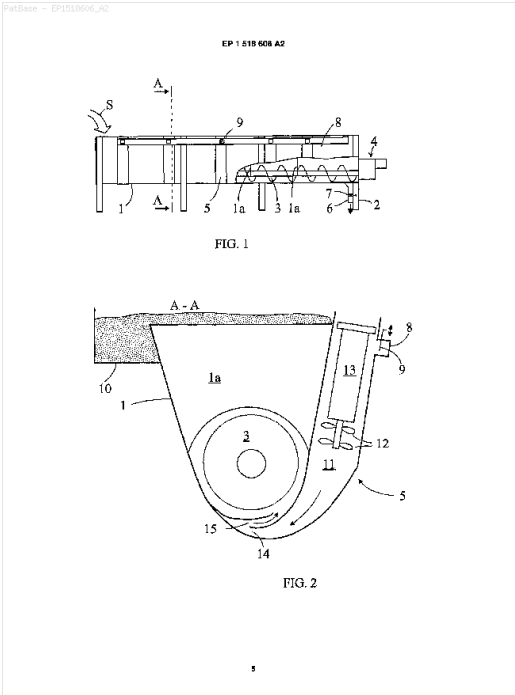
Classifications:

International (IPC 8-9): B01D21/02 B03D1/14 (Advanced/Invention); B01D21/02 B03D1/14 (Core/Invention)

International (IPC 1-7): B01D21/24 B03D1/14 B03D1/16 B03D1/22

CPC: B03D1/16 B01D21/2461 B03D1/1493 B03D1/028 B01D21/02

European: B01D21/02 B01D21/24N4 B03D1/14



Family:

Publication number	Publication date	Application number	Application date
EP1518606 A2	20050330	EP20040104550	20040921
EP1518606 A3	20050601	EP20040104550	20040921
FI20030345 U0	20030923	FI20030000345U	20030923
FI6034 U1	20031128	FI20030000345U	20030923

Priority:

FI20030000345U 20030923

Probable Assignee: TOMMILA PERTTI

Assignee(s): (std): TOMMILA PERTTI

Inventor(s): (std): TOMMILA PERTTI

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

UNIV ; SOUTHERN CALIFORNIA UNIV

Inventor(s): (std): KHOSHNEVIS BEHROKH ; KHOSHNEVIS BEROKH ; BEHROKH KHOSHNEVIS

Inventor(s): KHOSHNEVIS BEHROKH LOS ANGELES

Agent(s): MUELLER BORE AND PARTNER PATENTANWAELTE PARTG MBB; MUELLER BORE AND PARTNER
PATENTANWAELTE; Müller-Boré &, Partner Patentanwälte; MUELLER BORE AND PARTNER
PATENTANWAELTE; MARC E BROWN MCDERMOTT WILL AND EMERY; MCDERMOTT WILL AND EMERY
(LOS ANGELES OFFICE); MCDERMOTT WILL AND EMERY LOS ANGELES OFFICE; MCDERMOTT WILL AND
EMERY LLP

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
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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

Title: MIXER, MIXING METHOD, AND METHOD OF PRODUCING GYPSUM BOARD

Abstract: Source: US2007008815A The present invention provides a mixer and a mixing method which enable stable supply of **slurry** at a high flow rate with foam being uniformly mixed therein, and which enable reduction in consumption of foam to be fed to the **slurry**. The mixer (10) has a housing (20), a rotary disc (32), a **slurry** outlet **port** (45), a **slurry** delivery conduit (46) and a hollow connector section (4). A foam feeding **port** (41) is disposed in a predetermined position of an annular wall or the hollow connector section. The foam feeding **port** feeds the foam to the **slurry**, immediately before the **slurry** enters the **slurry** outlet **port**, or feeds the foam to the **slurry** in the hollow connector section. The **slurry** and the foam mix with each other at the **slurry** outlet **port** or on its downstream side. The foam is not substantially subjected to agitation impact of the mixer and a quantity of loss of the foam is reduced. The foam is uniformly mixed with the **slurry** even when the flow rate of **slurry** is increased, and therefore, the production rate of gypsum boards can be increased.

Classifications:

International (IPC 8-9): B01F15/02 B01F3/04 B01F3/12 B01F5/00 B01F5/06 B01F7/00 B01F7/16 B01F7/26 B28B1/30 B28C5/08 B28C5/12 B28C5/16 B28C5/38 B28C7/14 B28C7/16 B32B38/00 E04C2/04 (Advanced/Invention); B01F7/16 B01F7/26 B28B19/00 B28C5/16 E04C2/04 (Advanced/Non-invention); B28C5/16 (Core/Invention); B28C5/16 (Core/Non-invention)

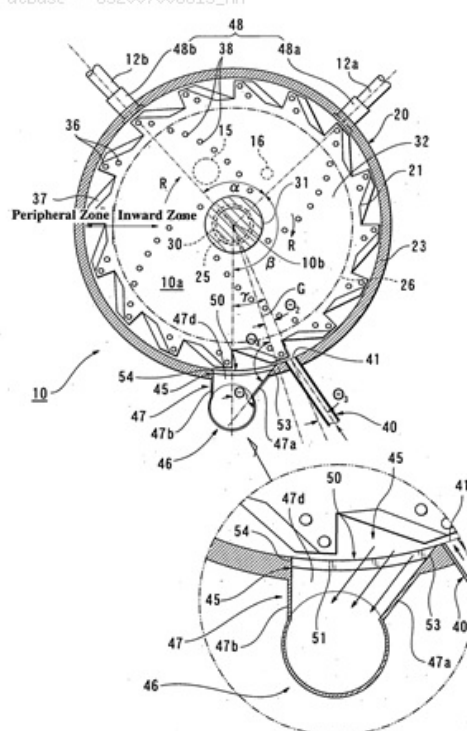
International (IPC 1-7): B01F7/16 B28C5/16

CPC: B01F3/04531 B01F7/00766 B28B19/0092 B28C5/0881 B28C5/1269 B28C5/386 B28C5/16 B01F3/04446

European: B01F7/00G1A B01F7/00G4 B28C5/08G B28C5/12F4 B28C5/38B4 L01F3/04C5 L28B19/00K

US: 156/39 366/172.1 366/172.100P 366/172.2 366/181.7 366/304 366/304S

PatBase - US2007008815_AA

**Family:**

Publication number	Publication date	Application number	Application date
AT516125 E	20110715	AT20040734405T	20040521
CA2527482 AA	20051122	CA20042527482	20040521
CA2527482 C	20130115	CA20042527482	20040521
CN100544811 C	20090930	CN200480014427	20040521
CN1795081 A	20060628	CN200480014427	20040521
DE602004033454 D1	20110901	DE200460033454T	20040521
EP1637302 A1	20060322	EP20040734405	20040521
EP1637302 A4	20090114	EP20040734405	20040521
EP1637302 B1	20110713	EP20040734405	20040521
ES2371502 T3	20120103	ES20040734405T	20040521
IN02412KN2005 A	20070727	IN2005KN02412	20051129
IN235080 B	20090626	IN2005KN02412	20051129
JP2004103663 A1	20060720	JP20050506424T	20040521
JP2010195049 A2	20100909	JP20100093106	20100414
JP4559360 B1	20101006	JP20050506424T	20040521
JP4559360 B2	20101006	JP20050506424T	20040521
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KR101076026 B1	20111021	KR20057021995	20051118
KR20060004990 A	20060116	KR20057021995	20040521
PL1637302 T3	20120229	PL20040734405T	20040521
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RU2357859 C2	20090610	RU20050140563	20040521
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TW200507997 A	20050301	TW20040114898	20040526
TWI323696 B	20100421	TW20040114898	20040526
US2007008815 AA	20070111	US20050558358	20051125
US7690834 BB	20100406	US20050558358	20051125
WO04103663 A1	20041202	WO2004JP07323	20040521

Priority:

EP20040734405	20040521	JP20030148201	20030526	TH20040091026	20040524
JP20050506424	20040521	JP20100093106	20100414	JP20030209461	20030829
WO2004JP07323	20040521				

Probable Assignee: YOSHINO GYPSUM CO LTD

Assignee(s): (std): JOSINO DZHIPSUM KO LTD ; NAKAMURA WATARU ; YOSHINO GYPSUM CO ; HIROOKA YUICHI
Assignee(s): JOSINO DZHIPSUM KO ; YOSHINO GYPSUM CO LTD JP ; YOSHINO GYPSUM CO LTD
Inventor(s): (std): YUICHI NAKAMURA WATARU HIROOKA ; YUICHI HIROOKA ; WATARU NAKAMURA ; NAKAMURA WATARU ; HIROOKA YUICHI ; NAKAMURA VATARU ; KHIROOKA JUITI
Inventor(s): HIROOKA YUICHI C O YOSHINO GYPSUM CO LTD ; HIROOKA YUICHI C O YOSHINO GYPSUM CO LTD TOYOHASHI SHI ; NAKAMURA WATARU C O YOSHINO GYPSUM CO LTD ; NAKAMURA WATARU C O YOSHINO GYPSUM CO LTD SODEGAURA SHI ; NAKAMURA WATARU HIROOKA YUICHI
Agent(s): SIM AND MCBURNEY; ZIMMERMANN AND PARTNER PATENTANWAELTE MBB; ZIMMERMANN GERD HEINRICH; JACOBSON HOLMAN PLLC
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

Title: BINDER FOAM CREATING **DEVICE** FOR **CEMENT** OR MORTAR FOAM HAS AIR INPUT TUBE IN SUPPLY TUBE, FORMING SEPARATE MIXING CHAMBERS WITH INNER WALL OF SUPPLY TUBE

Abstract: The binder foam creating **device** is divided into injection, mixing and foaming regions (I, II, III). It has a central air input tube (1) with outlet apertures (12) round it, and separating and mixing disks (2) on it. The air input tube is fitted in the supply tube (3), forming separate mixing chambers (13) with the inner wall of the supply tube.

Classifications:

International (IPC 8-9): B01F3/04 B01F5/04 B01F5/06

B28C5/06 (Advanced/Invention);

B01F3/04 B01F5/04 B01F5/06 B28C5/00 (Core/Invention)

International (IPC 1-7): B01F5/04 B28C5/06

CPC: B01F3/04446 B01F5/0406 B01F5/0451 B01F5/0453 B01F5/0463 B01F5/0682 B01F5/0688 B01F2215/0047 B28C5/06

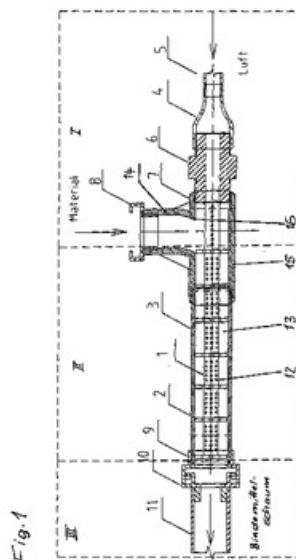
European: B01F3/04C3 B01F5/04C11B B01F5/04C13B

B01F5/04C13M B01F5/04C13S2 B01F5/06F B01F5/06F4B B28C5/06

L01F215/00A56

PatBase - DE10351690_A1

DE 103 51 690 A1 2005.02.10
Anhängende Zeichnungen



Family:

Publication number	Publication date	Application number	Application date
DE10351690 A1	20050210	DE20031051690	20031106
DE10351690 B4	20051117	DE20031051690	20031106

Priority:

DE20031030173 20030704 DE20031051690 20031106

Probable Assignee: F AND B GMBH FEUERSCHUTZ AND BRAND

Assignee(s): (std): F AND B GMBH FEUERSCHUTZ AND BRAND

Assignee(s): F AND B GMBH FEUERSCHUTZ AND BRANDBEKAEMPfung

Inventor(s): (std): KINDERMANN KLAUS ; MEISNER ANNETT

Title: SIMULATED STONE AND MASONRY AND BRICK TEXTURED SIDING PANELS

Abstract: Source: US2005087908A Simulated stone, masonry and brick textured siding panels are obtained when specially selected materials are properly admixed and formed via molding techniques. These siding panels are manufactured from suitable molds according to a prescribed process methodology using synthetic polymeric materials in addition to stone and masonry and brick materials. Prerequisite surface textures are produced that effectively simulate the corresponding actual stone, masonry and brick panels.

Classifications:

International (IPC 8-9): B29C39/02 B29C41/22 B44F9/00 B44F9/04 C04B28/00 C08K11/00 C08K3/10 C08K3/26 C08K3/30 C08K3/34 C08K7/02 C08K7/14 C08L1/02 C08L23/00 C08L23/06 C08L23/08 C08L23/12 C08L25/06 C08L25/12 C08L27/06 C08L31/06 C08L33/08 C08L37/00 C08L39/00 C08L55/02 C08L61/24 C08L61/28 C08L69/00 C08L7/00 C08L75/04 C08L77/00 C08L9/06 C08L95/00 C08L97/02 C09D5/29 E04C1/00 E04C2/20 (Advanced/Invention);

B29C37/00 (Advanced/Non-invention); B29C39/02 B29C41/22 B44F9/00 C04B28/00 C08K11/00 C08K3/00 C08K7/00 C08L1/00 C08L23/00 C08L25/00 C08L27/00 C08L31/00 C08L33/00 C08L37/00 C08L39/00 C08L55/00 C08L61/00 C08L69/00 C08L7/00 C08L75/00 C08L77/00 C08L9/00 C08L95/00 C08L97/00 C09D5/29 E04C1/00 (Core/Invention); B29C37/00 (Core/Non-invention)

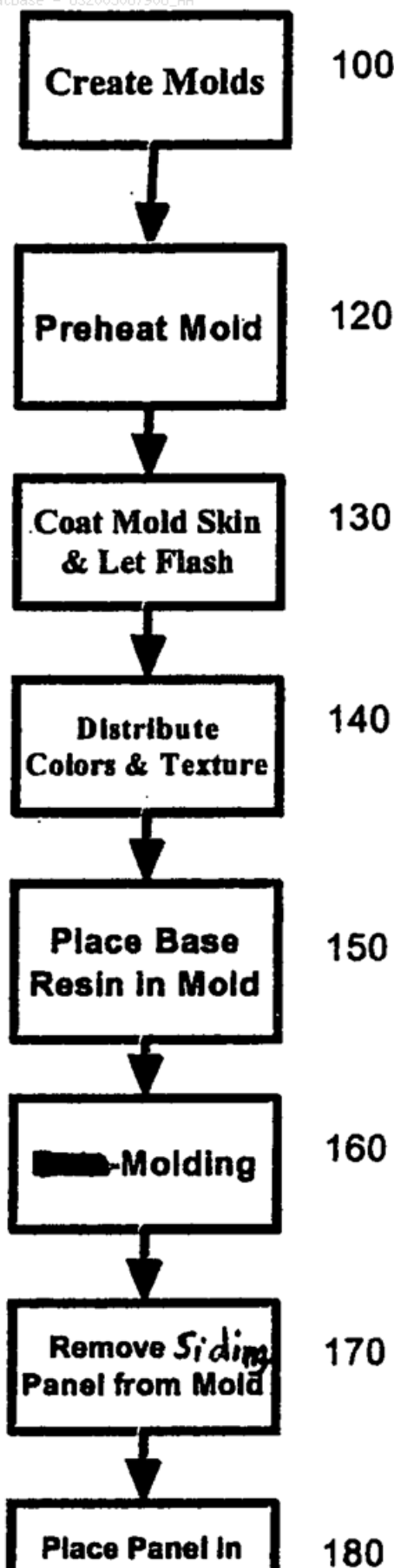
International (IPC 1-7): B29C41/22

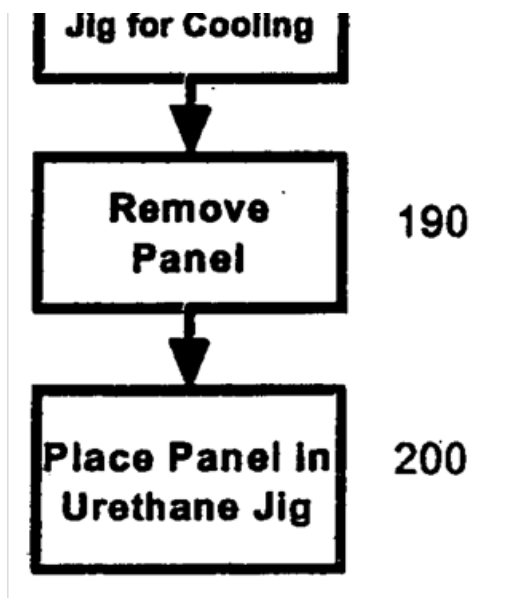
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European: B29C37/00C2B B29C39/02 B29C41/04 B29C41/08 B29C41/22 B29C44/12M B29C45/14Q B29C67/24C2 B44C5/04N B44C5/04P B44F11/00 B44F9/04 C04B26/02 C04B26/06 E04F13/08C E04F13/14J E04F13/18B L29C37/00C2B L29C37/00C2C L29C37/00C2D L29C43/00B L29C49/00 L29C51/00 L29C51/10 L29C791/00E4 L29C791/00E6 L29K105/00E L29K995/00F19 L29L31/10B L29L31/702 M04B111/54

US: 264/255 264/255P 264/256 264/256S 264/310 264/310S 52/309.4 52/309.400P 52/309.400S 52/311.1 52/311.100S 52/314 52/314P 52/612 52/612S 521/157 523/171 524/13 524/13S 524/15 524/15S 524/34 524/34S 524/35 524/35S 524/421 524/421S 524/425 524/425S 524/426 524/426S 524/427 524/427S 524/445 524/445S 524/447 524/447S 524/451 524/451S 524/456 524/456S 524/548 524/548S 524/555 524/555S 524/556 524/556S 524/559 524/559S 524/563 524/563S 524/565 524/565S 524/567 524/567S 524/570 524/570S 524/571 524/571S 524/575.5 524/575.500S 524/577 524/577S 524/582 524/582S 524/585 524/585S 524/587 524/587S 524/589 524/589S 524/59 524/590 524/590S 524/597 524/597S 524/599 524/599S 524/59S 524/606 524/606S 524/612 524/612S 524/8 524/8P 524/9 524/9S

PatBase - US2005087908.AA





Family:

Publication number	Publication date	Application number	Application date
US2005087908 AA	20050428	US20040971861	20041022
US2006197257 AA	20060907	US20060278537	20060403
US2007227087 AA	20071004	US20070694583	20070330
US2009056257 AA	20090305	US20080057244	20080327
US2009062413 AA	20090305	US20080057214	20080327
US2009062431 AA	20090305	US20080057173	20080327
US2011185662 AA	20110804	US20110071246	20110324
US7790784 BB	20100907	US20080057173	20080327

Priority:

US20030514414P 20031024	US20040971861 20041022	US20050667633P 20050401
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Probable Assignee: EXTERIOR PORTFOLIO LLC

Assignee(s): (std): NASR MOE ; KURIGER KURT ; CRANE PLASTICS CO LLC ; CRANE PLASTICS COMPANY LLC ; EXTERIOR PORTFOLIO LLC ; BURT KEVIN T ; CRANE BUILDING PRODUCTS LLC ; CRANE GROUP COMPANIES LTD

Assignee(s): CRANE PLASTICS CO ; AXIALL CORP ; AXIALL OHIO INC ; BARCLAYS BANK PLC COLLATERAL AGENT AS ; ROYAL BUILDING PRODUCTS USA INC ; ROYAL MOULDINGS LTD ; GEORGIA GULF CORP ; PLASTIC TRENDS INC ; GENERAL ELECTRIC CO ADMINISTRATIVE AGENT SUCCESSOR BY MERGER AS ; WELLS FARGO CAPITAL FINANCE LLC ADMINISTRATIVE AGENT AS ; CROSSAM INC ; CRANE PLASTICS SIDING LLC ; THE CRANE GROUP COMPANIES LIMITED ; GENERAL ELECTRIC CAPITAL CORP

Inventor(s): (std): NASR MOE ; KURIGER KURT ; BURT KEVIN T ; MOLLINGER PAUL J ; LAMBERT LARRY ; FRECHETTE JOHN P ; FAIRBANKS LARRY R ; CRIST PAUL ANTHONY ; ADUR ASHOK M

Inventor(s): BURT KEVIN ; FRECHETTE JOHN ; FAIRBANKS LARRY ; MOLLINGER PAUL

Agent(s): AL HARRISON HARRISON LAW OFFICE PC ; STANDLEY LAW GROUP LLP

Title: PROCESS AND **APPARATUS** FOR MANUFACTURING SET CELLULAR **CEMENT**

Abstract: Source: US2005219938A A process for manufacturing set cellular **cement**, including the steps of: (i) mixing cementitious material, water, foaming agent and optionally additives into a free flowing **slurry** having a slump of at least 100 mm; subsequently (ii) injecting and distributing air into the **slurry** of step (i) to form a cellular **slurry**; subsequently (iii) casting the cellular **slurry** of step (ii); and finally allowing the cellular **slurry** to set. And, an **apparatus** for carrying out the process.

Classifications:

International (IPC 8-9): B01F13/10 B01F15/00 B01F15/02 B01F7/00 B01F7/10 B28C5/00 B28C5/12 B28C5/14 B28C5/16 B28C5/38 C04B28/14 C04B38/00 C04B38/10 C04B40/00 C04B40/06 E28C5/12 E28C5/38 (Advanced/Invention); B01F7/00 B01F7/02 (Advanced/Non-invention); B01F13/00 B01F15/00 B01F15/02 B01F7/00 B01F7/02 B28C5/00 B28C5/12 C04B28/00 C04B38/00 C04B38/10 C04B40/00 (Core/Invention); B01F7/00 (Core/Non-invention); B28C C04B (Subclass/Invention)

International (IPC 1-7): B28C5/12 B28C5/14 B28C5/16 B28C5/38 C04B28/14 C04B38/10

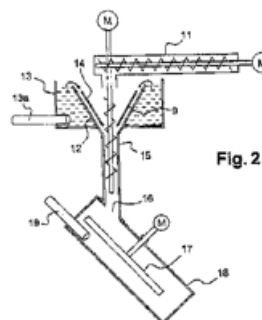
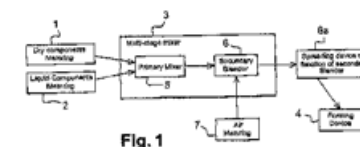
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US: 366/10 366/10S 366/11 366/11P 366/13 366/13S 366/15 366/15S 366/3 366/3P 427/430.1

PatBase - US2005219938_AA

Patent Application Publication Oct. 6, 2005 Sheet 1 of 5 US 2005/0219938 A1



Family:

Publication number	Publication date	Application number	Application date
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Priority:

EP20040290494 20040224 US20050906143 20050204 US20080192425 20080815
WO2005EP02576 20050222

Probable Assignee: LAFARGE SA

Assignee(s): (std): BOLD JOERG ; BOLD JORG ; BUTLER STEVEN ROY ; LAFARGE PLATRES ; RIGAUDON MICHEL ; MILLAMON ERIC ; LAFARGE SA

Assignee(s): LAFARGE GYPSUM INT

Inventor(s): (std): BUTLER STEVEN ROY ; ERIC MILLAMON ; ERIC RIGAUDON MICHEL BOLD JOER ; JORG BOLD ; MICHEL RIGAUDON ; MILLAMON ERIC ; BOLD JOERG ; RIGAUDON MICHEL ; BUTLER STEVEN R ; BOLD JORG ; PLATRES LAFARGE ; ROY BUTLER STEVEN ; JOERG BOLD ; BOLD JIRG

Inventor(s): JIRG BOLD ; STEVEN ROY BUTLER ; RIGAUDON MICHEL BOLD JOERG BUTLER STEVEN ROY ; LAFARGE
PLATRES ; RIGAUDON MICHEL BOLD JOERG BUTLER STEVEN ROY MILLA ; BUTLER STEVEN ;
MOLLAMON ERIC

Agent(s): SPRUSON AND FERGUSON; OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE CANADA SENCRL SRL
LLP; ALESSANDRI; MERIGEALT SHONA; BUCHANAN INGERSOLL PC, (INCLUDING BURNS DOANE
SWECKER AND MATHIS); BUCHANAN INGERSOLL PC INCLUDING BURNS DOANE SWECKER AND
MATHIS; BUCHANAN INGERSOLL AND ROONEY PC

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
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Title: METHOD AND **APPARATUS** FOR MAKING AIR-**ENTRAINED** OR CELLULAR HIGH-STRENGTH CONCRETE

Abstract: Source: US2008028988A A method for making foam used in the manufacture of concrete, the method comprising, in an exemplary embodiment for making foam at the rate of one cubic foot per minute; (1) injecting water into a mixer, the water injected at a temperature not less than 62 degrees Fahrenheit, the water injected at the rate from 252 ounces per minute to 1,178 ounces per minute; (3) injecting a chemical into the mixer, wherein the chemical comprises a surfactant, a foam booster and a stabilizer, the chemical injected at a temperature of not less than 52 degrees Fahrenheit and at a rate of 22 ounces to 79 ounces per minute; and (4) injecting air into the mixer, the air injected at a pressure from 62 pounds-per-square inch to 135 pounds-per-square inch, and at the rate of from 19 cubic feet per minute to 32 cubic feet per minute; whereby foam is made in the mixer, and may be later used in the manufacture of concrete.

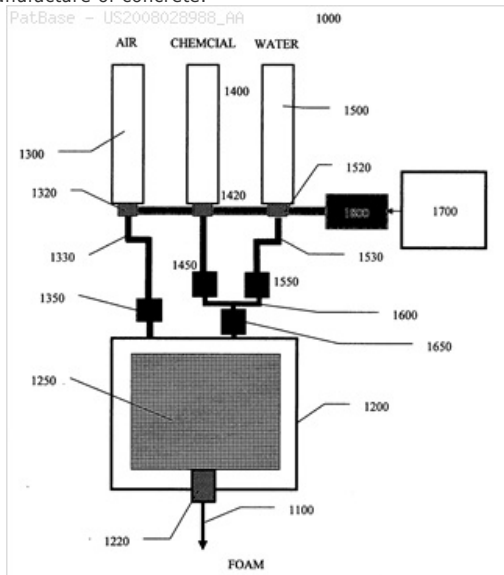
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European: B01F15/00K4 B01F3/04C2 B01F3/04C3 B01F3/04P2 B01F5/06F4G6 C04B40/00D1 L28C5/38B

US: 106/316 106/682 166/242.9 166/292 366/10 366/10S 366/151.1 366/151.100S 366/153.1 366/153.100S 366/17 366/3 366/4 366/4P 366/8



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Priority:

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Probable Assignee: MACH IV LLC

Assignee(s): (std): MACH IV LLC ; SMITH NORMAN SCOTT ; WELKER CHARLES D

Inventor(s): (std): WELKER CHARLES D ; SMITH NORMAN SCOTT

Inventor(s): WELKER CHARLES DAVID ; WELKER CHARLES

Agent(s): MACPHERSON LESLIE AND TYERMAN LLP; Loven Keith James; LOVEN KEITH JAMES; DAVID E ORR; HOWISON AND ARNOTT LLP; DAVID G; KATARZYNA; JORGENSON EDWARD

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

Title: METHODS AND SYSTEMS FOR PREPARING GYPSUM **SLURRY** CONTAINING A CELLULOSE ETHER

Abstract: Source: US2008303191A A method for forming a gypsum **slurry** comprises the steps of combining gypsum and water to form a **slurry**, combining cellulose ether with at least a **second** material configured to delay solubilization of the cellulose ether, and adding the combined cellulose ether and at least a **second** material to the **slurry**.

Classifications:

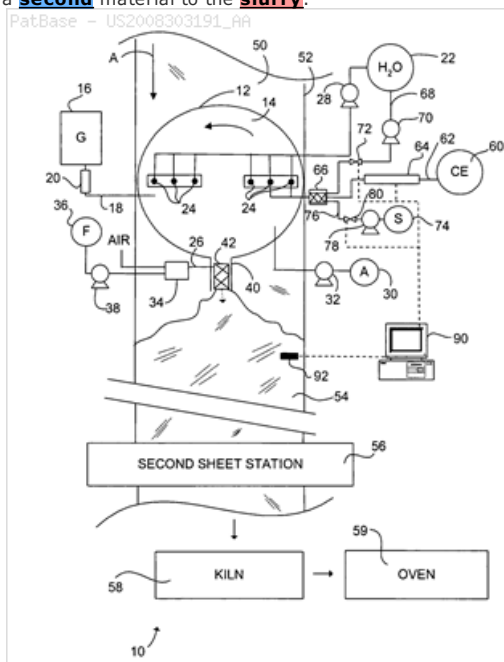
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International (IPC 1-7): C04B11/00 C04B28/14

CPC: B28B5/027 B28B17/023 C04B24/383 C04B28/14 C04B2111/0062 B28B17/0081

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US: 106/677 106/678 106/778 106/780 106/780S 264/109 264/333 264/333P 264/4.1 264/86



Family:

Publication number	Publication date	Application number	Application date
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US2008303191 AA	20081211	US20070811479	20070611
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Priority:

US20070811479 20070611

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): LIU QINGXIA ; MILLER DAVID PAUL ; UNITED STATES GYPSUM CO ; YU QIANG

Assignee(s): UNITED STATES GYPSUM COMPANY

Inventor(s): (std): LIU QINGXIA ; MILLER DAVID PAUL ; YU QIANG ; YU LISHA ; MILLER DAVID PAUL LIU QINGXIA

Inventor(s): MILLER DAVID PAUL LIU QINGXIA YU QIANG ; QIANG ; QINGXIA ; YU ; MILLER ; DAVID PAUL ; LIU

Agent(s): JOHANSSON; GREER BURNS AND CRAIN LTD; PRADIP; DAVID F; MICKELSON CAROLE 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 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 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

Title: STRUCTURALLY ENHANCED PLASTICS WITH FILLER REINFORCEMENTS

Abstract: Source: US2010093922A A composition comprising a **fluid**, and a material dispersed in the **fluid**, the material made up of particles having a complex three dimensional surface area such as a sharp blade-like surface, the particles having an aspect ratio larger than 0.7 for promoting kinetic boundary layer mixing in a non-linear-viscosity zone. The composition may further include an additive dispersed in the **fluid**. The **fluid** may be a thermopolymer material. A method of extruding the **fluid** includes feeding the **fluid** into an extruder, feeding additives into the extruder, feeding a material into the extruder, passing the material through a mixing zone in the extruder to disperse the material within the **fluid** wherein the material migrates to a boundary layer of the **fluid** to promote kinetic mixing of the additives within the **fluid**, the kinetic mixing taking place in a non-linear viscosity zone.

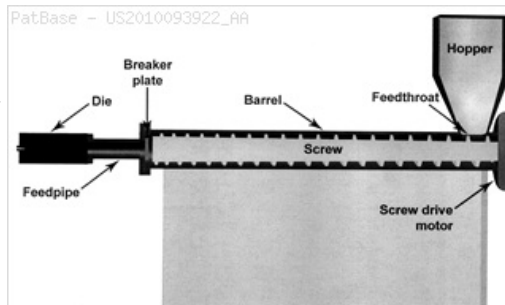
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International (IPC 8-9): B01F3/08 B05D1/02 B05D1/34 B24C1/08 B24C11/00 B29B7/00 B29B7/42 B29B7/80 B29B7/90 B29C B29C44/34 B29C47/00 B29C47/08 B29C47/10 B29C47/36 B29C47/38 B29C47/60 C08J C08J3/20 C08J5/16 C08J9/00 C08J9/24 C08K13/04 C08K3/34 C08K3/40 C08K7/00 C08K7/22 C08K7/26 C08L101/00 C08L23/06 C08L33/00 C08L97/02 C09D7/12 C09K3/00 C09K5/04 C09K5/06 C09K5/08 C09K5/10 C09K5/12 C09K7/00 C09K8/03 C09K8/38 C09K8/62 C09K8/68 C09K8/76 C09K8/80 C09K8/92 E21B43/26 E21B43/267 F15D1/12 F17D1/16 F28F13/02 F28F13/04 F28F13/12 F28F7/00 G01N33/20 (Advanced/Invention); B29C47/00 B29K105/00 B29K105/12 B29K105/16 (Advanced/Non-invention); B29C47/00 B29C47/38 C08J3/20 C08K7/00 C08L23/00 C09D7/12 (Core/Invention); B29C C08J C08K (Subclass/Invention)

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Priority:

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Probable Assignee: ECOPURO

Assignee(s): (std): ECOPURO ; ECOPURO L L C ; ECOPURO LLC ; EHKOP JURO ; JOHNSON WILLIAM L SR ; JOHNSON SR WILLIAM L ; WILLIAM JOHNSON SR ; JOHNSON WILLIAM L

Assignee(s): ECO PURO LLC

Inventor(s): (std): JOHNSON WILLIAM LEE ; WILLIAM L JOHNSON SR ; JOHNSON WILLIAM L ; JOHNSON WILLIAM ; JOHNSON SR WILLIAM L ; DZHONSON UILL JAM L ST ; JOHNSON WILLIAM L SR

Inventor(s): JOHNSON SR ; WILLIAM L JOHNSON ; JOHNSON SNR WILLIAM L ; WILLIAM LEE JOHNSON ; WILLIAM L SR JOHNSON

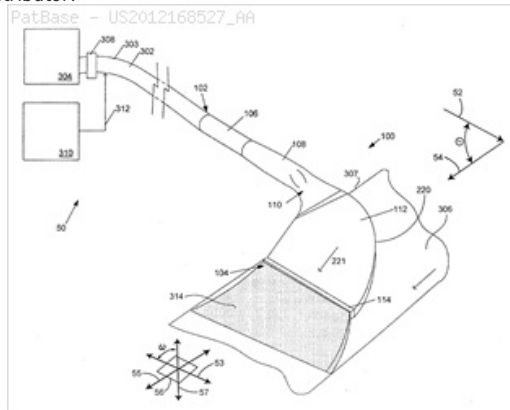
Agent(s): MALLESONS STEPHEN JAKUES; KING AND WOOD MALLESONS; MINTER ELLISON; MACRAE AND CO; CLARO SWINBRUN LUIS FELIPE; CLARO SWINBURN LUIS FELIPE; LEPPARD ANDREW JOHN; GREENWOOD MATTHEW DAVID; SCRIPT IP LTD; ELZABURU SLP ELZABURU SLP; LUZZATTO AND LUZZATTO; TOMITA HIROYUKI; KOISO TAKAKO; ONO SHINJIRO; KOBAYASHI YASUSHI; CHIBA AKIO; MATSUMOTO KEN; HOSHINO OSAMU; YAMAMOTO OSAMU; TAKEUCHI SHIGEO; HENRY GOH S PTE LTD; UGUR GUERSAD YALCINER; FELLERS SNIDER BLANKENSHIP,BAILEY AND TIPPENS; FELLERS SNIDER BLANKENSHIP BAILEY AND TIPPENS; FELLERS SNIDER BLANKENSHIP BAILEY AND TIPPENS PC; LEA III JAMES F; LEA JAMES F III

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 NZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SX 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

Abstract: Source: US2012168527A A **slurry** distributor for use in a continuous manufacturing process includes an inlet **opening** and a shaped **duct** adapted to receive a flow of **slurry** provided at the inlet **opening**. The shaped **duct** has a parabolic guide surface adapted to redirect the flow of **slurry**. An outlet **opening** in **fluid** communication with the shaped **duct** is adapted to **discharge** the flow of **slurry** from the **slurry** distributor.

Internal (IPC 8-9): A61K39/395 A61K45/06 B01F15/02
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F16L47/32 F16L55/24 F17D1/08 (Advanced/Invention);
B28B19/00 (Advanced/Non-invention);
B05C5/02 B28B19/00 F16L41/02 F16L43/00 (Core/Invention)
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Priority:

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Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): CHAN CESAR ; LEE CHRIS C ; LI ALFRED ; NELSON CHRIS ; RAGO WILLIAM ; LORING CURT ; NELSON CHRISTOPHER ROBERT ; RAGO WILLIAM J ; LORING CURTIS B ; UNITED STATES GYPSUM CO ; SONG DAVID ; WITTBOLD JAMES ; SCHENCK RONALD E ; SONG WEIXIN DAVID ; SONG WAIXIN DAVID ; WITTBOLD JAMES R ; UNITED STYATES GYPSUM CO ; SONG WEIXIN D

Assignee(s): CARRAZCO LUIS ; UNITED STATES GYPSUM CO CHICAGO ; PUNATI NAVEEN ; LI ALFRED C ; UNITED STATES GYPSUM COMPANY

Inventor(s): (std): ALFRED C LI ; ALFRED LI ; C CHEN ; CARRAZCO LUIS ; CEN CESAR ; CESAR CHAN ; CHAN CESAR ; CHAN SEZAR ; CHRIS C LEE ; CURT LORING ; LEE CHRISTOPHER C ; LI ALFRED ; LI ALFRED C ; LI IFRED ; LI KRIS K ; LORING CURT ; LORING CURTIS B ; LORING KURT ; LUIS CARRAZCO ; NAVEEN PUNATI ; NELSON CHRIS ; NELSON CHRISTOPHER ; NELSON CHRISTOPHER ROBERT ; PUNATI NAVEEN ; RAGO BILL ; RAGO UITYAM ; RAGO WILLIAM ; RAGO WILLIAM J ; RONALD E SCHENCK ; SCHENCK RONALD E ; SHENK RONALD E ; SONG DAVID ; SONG VEJSIN DEVID ; SONG WAIXIN DAVID ; SONG WEIXIN D ; SONG WEIXIN DAVID ; UITTBOLD DZHEJMS ; WEIXIN DAVID SONG ; WILLIAM J RAGO ; WILLIAM RAGO ; WITTBOLD JAMES ; JAMES WITTBOLD ; LEE CHRIS C ; WITTBOLD JAMES R

Inventor(s): LEE CHRIS C DEERFIELD ; WITTBOLD JAMES DES PLAINES ; SONG WEIXIN DAVID VERNON HILLS ; RAGO WILLIAM GURNEE ; LI ALFRED NAPERVILLE ; DAVID SONG ; CHRIS NELSON ; CHAN CESAR LIBERTYVILLE

Agent(s): JAMES AND WELLS INTELLECTUAL PROPERTY; MADDERNS PATENT AND TRADE MARK ATTORNEYS; MOFFAT AND CO; JOHANSSON AND LANGLOIS LTDA; MARKS AND CLERK LUXEMBOURG LLP; SCHUETTE HARTMUT; BSB INTELLECTUAL PROPERTY LAW; RIZZO SERGIO; BUDI RAHMAT SH; BUDI RAHMAT; RYBINOJ NA; NA RYBINOJ; LEYDIG VOIT AND MAYER LTD; PHILIP T; PRADIP K; FILBIN PAUL ET AL; HASAN SALIM ET AL

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Title: LIGHTWEIGHT, REDUCED DENSITY FIRE RATED GYPSUM PANELS

Abstract: Source: US2012219785A A reduced weight, reduced density gypsum panel that includes high expansion vermiculite with fire resistance capabilities that are at least comparable to (if not better than) commercial fire rated gypsum panels with a much greater gypsum content, weight and density.

Classifications:

International (ipc 8-9): B28B1/14 B28B1/30 B28B1/50 B28B11/12

B28B11/14 B28B11/24 B32B13/00 B32B13/02 B32B17/02

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E04F13/075 (Advanced/Invention);

C04B11/00 C04B11/28 (Advanced/Non-invention);

C04B20/00 (Core/Invention)

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PatBase - US2012219785_AA

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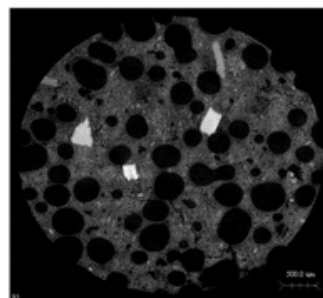


FIG. 1

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US2012219785 AA	20120830	US20120400010	20120217
US2013068364 AA	20130321	US20120669283	20121105
US2014158273 AA	20140612	US20140181590	20140214
US2017183868 AA	20170629	US20170457466	20170313
US8323785 BB	20121204	US20120400010	20120217
US8702881 BB	20140422	US20120669283	20121105
US9623586 BB	20170418	US20140181590	20140214
WO12116325 A1	20120830	WO2012US26613	20120224

Priority:

AU20120222102	20120224	AU20140201626	20140318	AU20150201675	20150401
AU20150100420	20150401	AU20160203704	20160603	AU20160203707	20160603
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US20140181590	20140214	EP20120709203	20120224	JP20150100879	20120224
CN201280014719	20120224	JP20130555618T	20120224	JP20150186332	20120224
JP20160167527	20160830	US20170457466	20170313	NZ20120615558	20120224

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): LI ALFRED ; LUAN WENQI ; SONG WEIXIN D ; UNITED STATES GYPSUM CO ; VEERAMASUNENI SRINIVAS ; YU QIANG ; USG CORP ; YUNAJTED STEJTS DZHIPSUM KOMPANI

Assignee(s): UNITED STATES GYPSUM COMPANY

Inventor(s): (std): ALFRED LI ; LI ALFRED ; LU QIANG ; LUAN WENQI ; QIANG YU ; SONG WEIXIN D ; SONG WEIXIN DAVID ; SRINIVAS VEERAMASUNENI ; VEERAMASUNENI SRINIVAS ; VEERAMASUNENI SRINIVAS D ; WEIXIN D SONG ; WEIXIN DAVID SONG ; WENQI LUAN ; YU QIANG

Agent(s): JAMES AND WELLS INTELLECTUAL PROPERTY; MOFFAT AND CO; SCHUETTE HARTMUT; BSB INTELLECTUAL PROPERTY LAW; BAHAR SANTOSO SH; LEYDIG VOIT AND MAYER LTD; PHILIP T; DAVID F; PRADIP K; FILBIN PAUL J 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 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

Title: GYPSUM PRODUCTS WITH HIGH EFFICIENCY HEAT SINK ADDITIVES

Abstract: Source: US2013216762A Disclosed herein are gypsum products with at least one high efficiency heat sink additive. The gypsum products, e.g., gypsum panels, are less susceptible to the damaging effects of extreme heat as the temperature rises due to the presence of the at least one additive.

Classifications:

International (IPC 8-9): B32B13/04 B32B13/08 C04B22/06

C04B28/14 E04B1/94 E04C2/04 (Advanced/Invention);
C04B22/06 (Core/Invention)

CPC: B32B13/04 C04B2111/0062 C04B2111/28 D21H21/16
D21H21/34 Y10T428/232 C04B28/14 C04B28/147 E04C2/043

US: 428/70

PatBase - US2013216762_AA

Patent Application Publication Aug. 22, 2013 Sheet 1 of 12 US 2013/0216762 A1

TABLE I: Exemplary Formulations for Reduced Weight and Density, Fire Resistant Gypsum Panels Formed According to Principles of the Present Disclosure			
Component	Core Density of about 80.2 to about 88.3 pcf (about 483.6 to about 545.5 kg/m ³)	Core Density of About 22.2 to About 38.3 pcf (about 912.8 to about 413.9 kg/m ³)	Core Density of About 15.3 to About 37.3 pcf (about 968.0 to about 397.8 kg/m ³)
Stucco (approx. 95% gypsum)	about 142 to about 1545 Brinell (about 5.7 to about 7.6 kgf/cm ²)	about 1277 to about 1382 Brinell (about 5.6 to about 7.3 kgf/cm ²)	about 1214 to about 1319 Brinell (about 5.6 to about 7.1 kgf/cm ²)
Core weight gypsum	about 1420 to about 1580 Brinell (about 7.6 to about 8.7 kgf/cm ²)	about 1380 to about 1580 Brinell (about 7.3 to about 8.3 kgf/cm ²)	about 1340 to about 1580 Brinell (about 7.8 kgf/cm ²)
High expansion vermiculite (% by weight of stucco)	about 5 to about 10	about 7.3 to about 8.5	about 6.5
Silica (% by weight of stucco)	up to about 5	up to about 2.5	up to about 1.5
Phosphate (% by weight of stucco)	up to about 0.40	up to about 0.25	up to about 0.15
Dispersant (% by weight of stucco)	up to about 1	up to about 0.8	up to about 0.5
High Efficiency Heat Sink Additive (% by weight of stucco)	up to about 10	up to about 10	up to about 10
Mineral, Glass, or Carbon Fiber (% by weight of stucco)	about 0.3 to about 0.9	about 0.4 to about 0.7	about 0.5
Paper Cover Sheets	about 40 to about 65 Brinell (about 190 to about 317 g/m ²)	about 48 to about 60 Brinell (about 238 to about 293 g/m ²)	about 48 to about 51 Brinell (about 234 to about 244 g/m ²)
Board Density (core and cover sheets)	about 59 to about 79.5 pcf (about 483.6 to about 625.7 kg/m ³)	about 52 to about 58.5 pcf (about 312.8 to about 416.7 kg/m ³)	about 55.5 to about 57.5 pcf (about 348.7 to about 467.9 kg/m ³)
Board Weight, 5/8 inch thick panel	about 1400 to about 2015 Brinell (about 7.8 to about 10 kgf/cm ²)	about 1360 to about 2040 Brinell (about 8.3 to about 9.8 kgf/cm ²)	about 1330 to about 2010 Brinell (about 9.3 to about 9.5 kgf/cm ²)

FIG. 1A

Family:

Publication number	Publication date	Application number	Application date
AU2013221770 AA	20130822	AU20130221770	20130213
AU2013221770 BB	20160609	AU20130221770	20130213
CA2863577 AA	20140731	CA20132863577	20130213
CN104114512 A	20141022	CN201380008520	20130213
CN104114512 B	20170926	CN201380008520	20130213
EP2814786 A1	20141224	EP20130706849	20130213
ID201601020 A	20160311	ID2014P0005251	20130213
IN07368DN2014 A	20150424	IN2014DN07368	20140902
JP2015514602 T2	20150521	JP20140557731T	20130213
KR20140129083 A	20141106	KR20147024632	20130213
MX2014009534 A1	20141013	MX20140009534	20130213
NZ630185 A	20160226	NZ20130630185	20130213
RU2014135297 A	20160410	RU20140135297	20130213
RU2628347 C2	20170816	RU20140135297	20130213
TH147625 A	20160304	TH20141004497	20130213
US2013216762 AA	20130822	US20130766181	20130213
WO13122974 A1	20130822	WO2013US25812	20130213

Priority:

US20120600574P 20120217 US20130766181 20130213 WO2013US25812 20130213

Probable Assignee: RESEARCH IN MOTION LTD

Assignee(s): (std): UNITED STATES GYPSUM CO

Assignee(s): UNITED STATES GYPSUM CO550 WEST ADAMS STREETCHICAGOIL60661US ; YU QIANG ; SONG WEIXIN D ; VEERAMASUNENI SRINIVAS ; CAO BANGJI ; CHAN CESAR ; RESEARCH IN MOTION LTD ; ROSENTHAL GUY

Inventor(s): (std): CHAN CESAR ; CAO BANGJI ; ROSENTHAL GUY ; SONG WEIXIN D ; VEERAMASUNENI SRINIVAS ; YU QIANG

Inventor(s): YU QIANGUS ; BANGJI CAO ; VEERAMASUNENI SRINIVASUS ; WEIXIN D SONG ; SONG WEIXIN DUS ; SRINIVAS VEERAMASUNENI ; ROSENTHAL GUYUS ; CAO BANGJIUS ; CESAR CHAN ; CHAN CESARUS ; GUY ROSENTHAL ; QIANG YU

Agent(s): MADDEN PATENT AND TRADE MARK ATTORNEYS; JAMES AND WELLS INTELLECTUAL PROPERTY; MOFFAT AND CO; BSB INTELLECTUAL PROPERTY LAW; HASAN SALIM ET AL

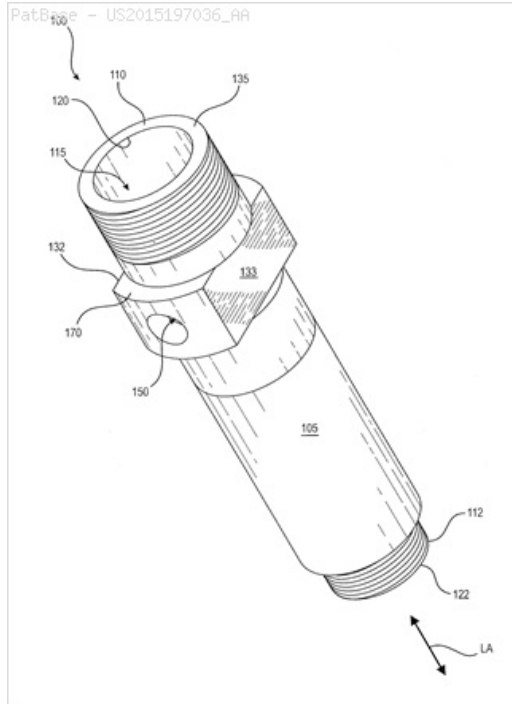
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Title: FOAM INJECTION SYSTEM WITH VARIABLE PORT INSERTS FOR SLURRY MIXING AND DISPENSING APPARATUS

Abstract: Source: US2015197036A A foam injection system for use in the manufacture of cementitious products includes a foam injection body and first and second port inserts. The foam injection body defines a slurry passageway and a port passageway having a port opening in fluid communication with the slurry passageway. The first and second port inserts respectively define first and second foam passageways having first and second orifice sizes. The first and second orifice sizes are different. The first and second port inserts are adapted to removably mount to the foam injection body such that the respective foam passageway is in fluid communication with the slurry passageway via the port opening of the port passageway. One port insert can be replaced with another to readily vary the pressure of the foam passing through the particular port insert and injected into a cementitious slurry traveling through the slurry passageway.

Classifications:

International (IPC 8-9): B01F B01F15/04 B01F3/08 B01F5/04 B28B B28B19/00 B28C B28C5/00 B28C5/02 B28C5/06 B28C5/38 B28C7/04 C04B38/10 (Advanced/Invention); B01F5/04 B28B19/00 B28C5/06 B28C7/04 (Core/Invention)
CPC: B01F5/048 B01F15/0412 B28B19/0092 B28C5/06 B28C7/0413 B01F3/0865 B01F3/088 Y10T137/87652 B28C5/381 B01F5/0471
US: 137/896 366/10



Family:

Publication number	Publication date	Application number	Application date
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AU2015206642 AA	20150723	AU20150206642	20150113
CA2936240 AA	20160707	CA20152936240	20150113
CL2016001712 A1	20161202	CL20160001712	20160704
CN105848840 A	20160810	CN201580003386	20150113
CO20160000465 A2	20161230	CO20160000465	20160729
EP3094459 A1	20161123	EP20150701895	20150113
IN201617024871 A	20160831	IN201617024871	20160720
JP2017510473 T2	20170413	JP20160543586T	20150113
KR20160108372 A	20160919	KR20167020324	20150113
MX2016008632 A1	20160926	MX20160008632	20150113
PE08932016 A1	20160828	PE20160000967	20150113
TH167369 A	20170907	TH20161003911	20150113
TW201527059 A	20150716	TW20150100842	20150109
US2015197036 AA	20150716	US20140527417	20141029
WO15108851 A1	20150723	WO2015US11154	20150113
ZA201605590 A	20171025	ZA20160005590	20160812

Priority:

US20140527417 20141029 US20140927881P 20140115 WO2015US11154 20150113

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO

Assignee(s): WITTBOLD JAMES ; CARRAZCO LUIS

Inventor(s): (std): CARRAZCO LUIS ; JAMES WITTBOLD ; LUIS CARRAZCO ; WITTBOLD JAMES

Agent(s): MADDERNS PATENT AND TRADE MARK ATTORNEYS; JAMES AND WELLS INTELLECTUAL PROPERTY; MOFFAT AND CO; JOHANSSON AND LANGLOIS; DANILO ROMERO RAAD; BSB INTELLECTUAL PROPERTY LAW; HASAN SALIM 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

Title: **SLURRY** MIXER GATE WITH ENHANCED FLOW AND FOAMING GEOMETRY

Abstract: Source: US2015328607A A **discharge** gate is provided for a gypsum **slurry** mixer, and includes a lower member having an inlet **opening** configured for receiving the **slurry**, and an outlet **opening** configured for delivering the **slurry** to a dispensing **device**. An upper member is attached to the lower member, at least one of the upper and lower members having at least one **opening** for accommodating insertion of an injection **port** for introducing the foam to the **slurry**. A cavity is configured for mixing the foam and **slurry**, and is defined by inner surfaces of the lower member and the upper member.

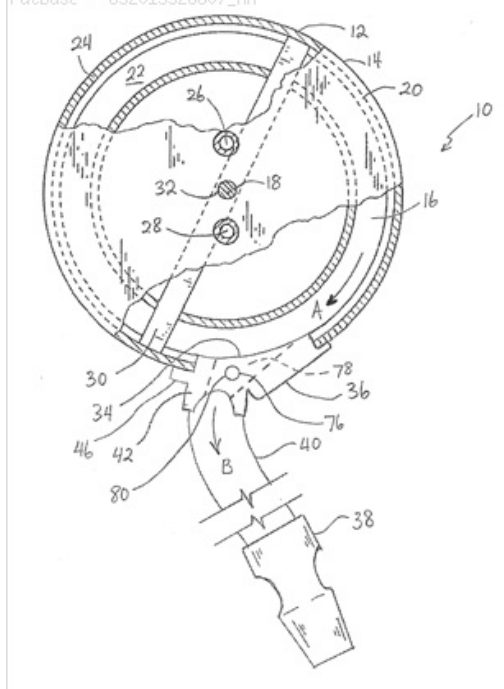
Classifications:

International (IPC 8-9): B01F15/02 B01F3/04 B01F3/12 B01F5/00 B01F7/18 B28C5/08 B28C5/38 B28C7/16 (Advanced/Invention); B01F5/00 B28C5/08 (Core/Invention)

CPC: B01F15/0267 B01F5/008 B01F3/0446 B28C5/0881 B28C5/386 B01F3/1221 B01F7/18 B01F15/0234 B01F2003/1257 B01F5/0071

US: 366/167.1 366/182.4

PatBase - US2015328607_AA



Family:

Publication number	Publication date	Application number	Application date
AU2015264622 AA	20151126	AU20150264622	20150511
CA2948359 AA	20161107	CA20152948359	20150511
CL2016002933 A1	20170317	CL20160002933	20161117
CN106457608 A	20170222	CN201580024579	20150511
CO20160004925 A2	20170130	CO20160004925	20161202
EP3145686 A1	20170329	EP20150723110	20150511
IN201617042040 A	20170310	IN201617042040	20161208
JP2017520426 T2	20170727	JP20160566280T	20150511
KR20170007342 A	20170118	KR20167034034	20150511
MX2016014348 A1	20170127	MX20160014348	20150511
PE15062016 A1	20170107	PE20160002195	20150511
PH2016502259 A	20170206	PH20160502259	20161111
TH166623 A	20170824	TH20161006730	20150511
US2015328607 AA	20151119	US20150686154	20150414
WO15179153 A1	20151126	WO2015US30078	20150511

Priority:

US20140000244P 20140519 US20150686154 20150414 WO2015US30078 20150511

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO

Assignee(s): WITTBOLD JAMES R ; LEE CHRIS C

Inventor(s): (std): CHRIS C LEE ; JAMES R WITTBOLD ; LEE CHRIS C ; WITTBOLD JAMES R ; WITTBOLD JAMES

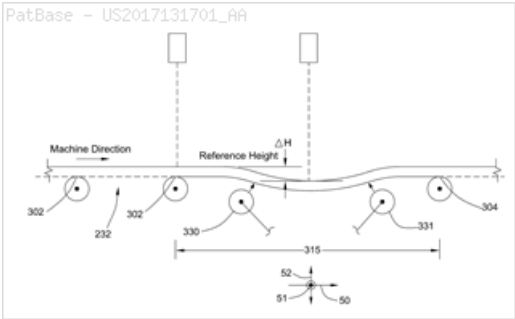
Agent(s): MADDEN'S PATENT AND TRADE MARK ATTORNEYS; JAMES AND WELLS INTELLECTUAL PROPERTY; MOFFAT AND CO; JOHANSSON AND LANGLOIS LTDA; DANILO ROMERO RAAD; SSB INTELLECTUAL PROPERTY LAW; CRAIN LAWRENCE ET AL

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

Title: SYSTEM AND METHOD FOR MANUFACTURING CEMENTITIOUS BOARDS WITH ON-LINE BOARD MEASUREMENT

Abstract: Source: US2017131701A Embodiments of a system and a method for continuously measuring cementitious board during the continuous manufacture thereof can be used in connection with the manufacture of various cementitious products, including gypsum wallboard, for example. Embodiments of a system and a method for continuously measuring cementitious board during its continuous manufacture can be used online in a continuous manufacturing process to effectively determine the degree to which cementitious **slurry** has set (e.g., expressed as percent hydration) at a predetermined location, such as, near a cutting station, for example. A height measuring system can be used to determine the relative amount the cementitious board sags as it passes over an unsupported span disposed between the forming station and the cutting station and to correlate the measured sag distance with a value of percent hydration of the cementitious **slurry** of that particular **portion** of the cementitious board.

Classifications:
International (IPC 8-9): B28B17/00 B28B19/00 C04B11/00 G01B11/06 G01B21/32 G05B19/402 (Advanced/Invention)
CPC: G05B19/402 C04B11/00 G05B2219/45054 G05B2219/49001 B28B17/0081 B28B19/0092 G01B11/0691



Family:

Publication number	Publication date	Application number	Application date
US2017131701 AA	20170511	US20160271989	20160921
WO17078952 A1	20170511	WO2016US58387	20161024

Priority:

US20150251396P 20151105 US20160271989 20160921

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO

Inventor(s): (std): NELSON ROBERT ; PAULY CHRISTOPHER MARK ; ROWE ANDREW ; WHITTINGTON CHARLES

Agent(s): HASAN SALIM ET AL

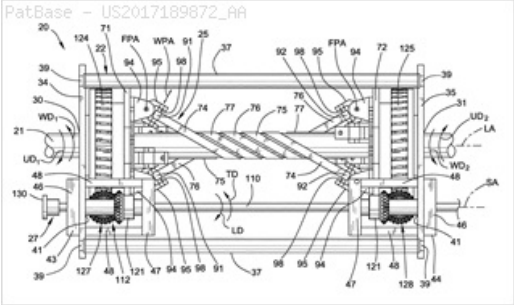
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT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

Title: CONSTRICTOR VALVE WITH WEBBING, CEMENTITIOUS **SLURRY** MIXING AND DISPENSING ASSEMBLY, AND METHOD FOR MAKING CEMENTITIOUS PRODUCT

Abstract: Source: US2017189872A A constrictor valve can be associated with a conduit in **fluid** communication with a mixer to control a flow of cementitious **slurry discharged** from the mixer through the conduit. The constrictor valve can include a constrictor housing, a webbing constriction assembly, and a drive mechanism. The webbing constriction assembly includes a pair of rotatable members rotatably mounted to the constrictor housing and a plurality of webbing straps connected to the rotatable members and wrapped around the conduit. The drive mechanism includes a drive shaft and a gear assembly configured to rotate the rotatable members in opposing winding directions in response to the drive shaft rotating in a tighten direction to wrap the webbing straps tighter around the conduit to compress it and to rotate in opposing unwinding directions in response to the drive shaft rotating in a loosen direction to loosen the grip of the webbing straps on the conduit.

Classifications:

International (IPC 8-9): B01F15/00 B01F15/02 B01F3/12 B28C5/00 B28C7/16 C04B11/00 F16K31/54 F16K7/06 F16K7/08 (Advanced/Invention)
CPC: B01F15/0293 B01F3/1207 B01F15/00337 B01F15/00487 C04B11/00 B28C5/003 B28C7/16 B01F2215/0047 F16K7/08 F16K31/54 F16K7/06



Family:

Publication number	Publication date	Application number	Application date
US2017189872 AA	20170706	US20160296874	20161018
WO17116780 A1	20170706	WO2016US67416	20161219

Priority:

US20150273980P 20151231 US20160296874 20161018

Probable Assignee: UNITED STATES GYPSUM CO

Assignee(s): (std): UNITED STATES GYPSUM CO

Inventor(s): (std): SCHENCK RONALD E

Agent(s): HASAN SALIM 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 KH 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