

1) Family number: 150174 (GB1228790A)

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Title: Filter press control system.

Abstract: 1,228,790. Filter press control system. EBEAHARD HOESCH and SOHNE. 16 May, 1968 [23 May, 1967], No. 23328/68. Heading B1D. A ram 21 seals the plates 6, 7 of a filter press. Hydraulic sealing fluid is supplied by line 20. Piston surface 10 is subjected to the fluid pressure inside the press, and surface 16 is exposed to the sealing pressure. A contact manometer 28 connected to chamber 26 operates as follows: (i) if the sealing pressure is too low relative to the pressure inside the press, piston 13 moves to the right, causing pressure to drop in chamber 26, so that a contact of manometer 28 rotates to 29, activating a sealing pressure pump; (ii) if the sealing pressure is high enough, the contact of manometer 28 moves to 30, and the pump is switched off; (iii) if the sealing pressure is too high, the piston 13 is forced to the left, causing the pressure in chamber 26 to rise, and the contact of manometer 28 moves to 31, causing release valve 24 to open. Valve 33. is optional, and compensates for leakage losses. In Fig. 3, the liquid for filtration is introduced into the press via conduit 36, 34, 33 coaxial with the pistons.

Classifications:

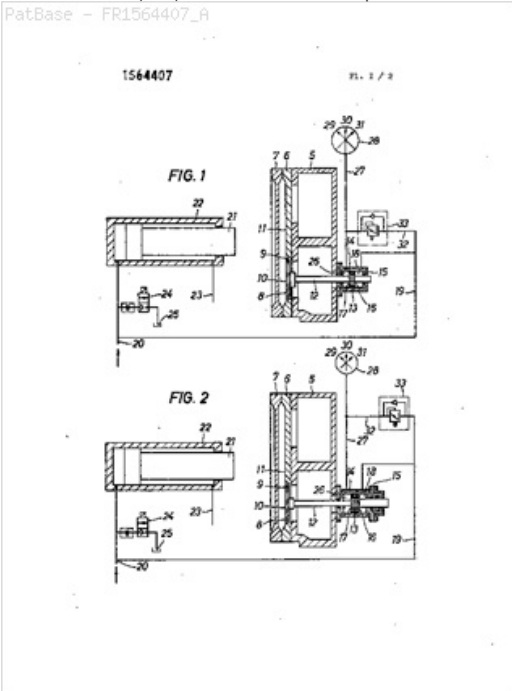
International (IPC 8-9): B01D25/19 (Advanced/Invention);

B01D25/12 (Core/Invention)

International (IPC 1-7): B01D25/12 B01D25/14 B01D37/04 B30B15/16

CPC: B01D25/19

European: B01D25/19



Family:

Publication number	Publication date	Application number	Application date
CH475021 A	19690715	CH19680006539	19680502
DE1536825 A1	19700402	DE19671536825	19670523
FR1564407 A	19690418		19680521
GB1228790 A	19710421		19680516

Priority:

DE1967H062820 19670523

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Inventor(s): (std): ALFONS SCHOTTEN ; SCHOTTEN ALFONS

2) Family number: 1237192 (GB2016942A)

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Title: A METHOD OF AND AN APPARATUS FOR EXPRESSING LIQUID FROM CLARIFYING SLUDGES

Abstract: In a filter press (1) having communicating pressing chambers with a stack of plates (3, 4, 6) squeezable between a movable platen (9) and a fixed end plate (7), an initial sludge charging operation is followed by at least ten pressing operations in each of which there occurs further charging of the pressing chambers with smaller sludge amounts, the charging being initiated when the pressure in the chambers has fallen below a given lower value as a result of filtrate removal and the charging being stopped when the pressure has risen to a given upper value, this upper value being increased stepwise during the pressing operations to a maximum value. The limit value of the pressure in the initial charging operation is not more than 25 percent of the maximum upper value. The operation may be automatically controlled by a relay circuit controller 126. Additives, e.g. lime, may

be mixed with the sludge by an arrangement 58, 121.

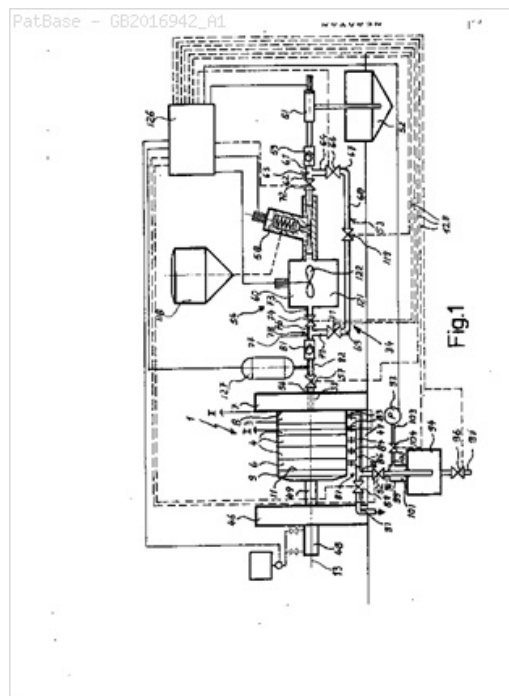
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International (IPC 8-9): B01D25/00 B01D37/00 (Advanced/Invention);
B01D25/00 B01D37/00 (Core/Invention)

International (IPC 1-7): B01D25/12 B01D37/04 B01F5/04 C02C3/00
C02F11/12 C02F11/14

CPC: B01D25/007 B01D25/12 B01D25/176 B01D25/19 B01D25/30
B01D37/04 B01D25/003 B01D37/00 B01D2201/20

European: B01D25/00R B01D37/00 L01D201/20



Family:

Publication number	Publication date	Application number	Application date
AT361868 B	19810410	AT19780007980	19781108
AT798078 A	19800815	AT19780007980	19781108
CH634538 A	19830215	CH19780011343	19781103
DE2750028 A1	19790510	DE19772750028	19771109
DE2750028 C2	19890629	DE19772750028	19771109
GB2016942 A1	19790926	GB19780043784	19781109
GB2016942 B2	19820603	GB19780043784	19781109

Priority:

DE19772750028 19771109

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HANS KUEBLER FA ; FA HANS KUEBLER ; FA HANS KUEBLER 7534 BIRKENFELD DE ; FIRMA HANS KUEBLER

Inventor(s): (std): FLACH ROLF

Inventor(s): ROLF FLACH ; FLACH ROLF 7033 HERRENBERG DE

3) Family number: 25963226 (GB1080501A)

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Title: PISTON-TYPE FILTER PRESS

Abstract: 1,080,501. Piston type press filters. STAHLWERKE SUDWESTFALEN A.G. May 4, 1965 [May 5, 1964], No. 18811/65. Heading BID. The chamber of a piston type press filter is lined with filtering grids and comprises an upper portion 3, of larger cross-section than the piston 2, in which preliminary filtering takes place under the delivery pressure of the material to be filtered, and a lower portion 1, in which piston 2 is a close sliding fit and in which further filtration takes place. Figs. 1a (not shown) and 1b represent five such presses arranged in parallel and operated by two hydraulic rams (6) via a common pressure plate (5). The filter chambers are of elongated rectangular section (Fig. 3, not shown) and their two portions 1, 3 are each lined with alternate bars (18) of rectangular and circular section, which extend vertically, engage rounded ribs (19) (Figs 4a, 4b, not shown) and whose spacing is adjustable. Behind bars (18), the walls (16) of the chambers have horizontal and vertical filtrate drainage ducts (22), (23). (24). Piston 2 and its rods 4 carry scrapers 15 to engage the walls of chamber portion 3. Scrapers 15 are of open frame shape so that sludge can pass through them down the chamber. At the lower ends chamber portions 1 are closed by a common sliding valve 10. In operation, valve 10 is initially closed and sludge delivered through a non-return valve (14) to the upper ends of the chambers, at about 10 atmospheres pressure. Once reciprocation of the pistons 2 has formed a plug 25 of solid material in each chamber portion 1, valve 10 is opened, and further working strokes cause continuous extrusion of pressed material through openings 9. Valve (14) prevents sludge returning to the supply conduit on the upward return strokes.

Classifications:

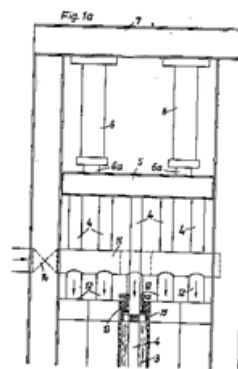
International (IPC 8-9): B01D25/12 B30B9/06 (Advanced/Invention);
B01D25/12 B30B9/02 (Core/Invention)

International (IPC 1-7): B01D25/12 B01D25/18

CPC: B30B9/06 B01D25/12 B01D25/215 B01D25/285 B01D25/302
B01D25/322

European: B01D25/12 B01D25/12B B01D25/21B B01D25/28D2
B01D25/30B B01D25/32B B30B9/06

198601 COMPLETE SPECIFICATION
5 SHEETS This drawing is a reproduction of
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Sheet 1

**Family:**

Publication number	Publication date	Application number	Application date
AT253531 B	19670410	AT19650003114	19650406
BE663247 A	00000000		00000000
CH435209 A	19670515	CH19650006031	19650429
GB1080501 A	19670823	GB19650018811	19650504
NL6505691 A	19651108	NL19650005691	19650504

Priority:

DE1964ST22082 19640505

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Title: PROCEDE DE VIDAGE AUTOMATIQUE DE FILTRES-PRESSES ET DISPOSITIF POUR LA MISE EN OEUVRE DE CE PROCEDE
PROCESS FOR AUTOMATIC DUMP FILTER-PRESSES AND DEVICE FOR IMPLEMENTING THE METHOD (Machine translation)

Abstract: (Claim 1) 1, we can predict two complementary tracks, designated by 5 and 6, one of whom may receive a game reserve of press plates, the other a game which is found defective, which can replace it without stop the cycle operative. The raceways 5 and 6 can be aligned with any of the positions that best suits each of them with a winch cable to be able to remove the presses of the hub and bring them back. The invention is not limited to the embodiments described above in details but it is obvious that changes can be made to the forms above described device without departing from the spirit of the invention.
SUMMARY The present invention relates to objects 1 "a process for handling filterpresses arranged in groups or series and supplied with cement or other material such as sludge from a common source, consisting essentially has unload the press plates of each filter press after filtration forwarding them on a track through the intermediary of mechanical means disposed on said runway, then bring said plates to their closed position and apply the necessary pressure to close said plates after their return to the press. It operates continuously to do the presses are mounted on a turntable rotated around a fixed center point of air-regulation in mud or other, constituting the power source for proper presses, the filter cake being collected by a carrier has in the raceway;

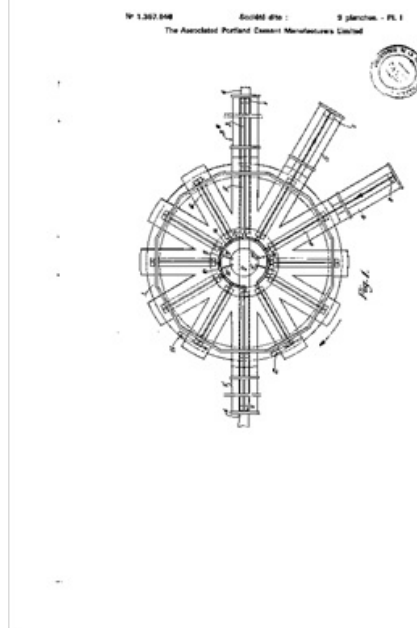
Classifications:

International (IPC 8-9): B01D25/12 B01D35/00 (Advanced/Invention);
B01D25/12 B01D35/00 (Core/Invention)

International (IPC 1-7): B01D35/00

CPC: B01D25/172

European: B01D25/12 B01D35/00

**Family:**

Publication number	Publication date	Application number	Application date
FR1357648 A	19640410	FR19620916908	19621128

Priority:

FR19620916908 19621128

Probable Assignee: ASS PORTLAND CEMENT**Assignee(s):** (std): ASS PORTLAND CEMENT**Assignee(s):** ASSOCIATED PORTLAND CEMENT MANUFACTURERS LTD ; THE ASSOCIATED PORTLAND CEMENT MANUFACTURERS LIMIT ; THE ASSOCIATED PORTLAND CEMENT MANUFACTURERS LIMITED**5) Family number: 30148324 (US4231770A)**

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Title: BAG-TYPE FILTER APPARATUS WITH INTERNAL AIR DIFFUSER

Abstract: The cleaning of a tubular filter bag when a periodic reverse purge of air is directed into the outlet end of the filter bag is significantly enhanced in accordance with the present invention by providing interiorly of the filter bag means for diffusing and distributing the reverse purge of air throughout the filter bag. More particularly, a hollow diffuser tube is provided extending longitudinally within the tubular supporting cage of the filter bag with one end of the diffuser tube communicating with the outlet end of the filter bag. The diffuser tube has perforations therein located for diffusing and distributing air throughout the filter bag when a periodic reverse purge of air is directed into the outlet end of the filter bag and into the diffuser tube.

Classifications:**International (IPC 8-9):** B01D46/00 B01D46/02 B01D46/04

B01D46/06 (Advanced/Invention);

B01D46/00 (Advanced/Non-invention);

B01D46/00 B01D46/02 B01D46/04 (Core/Invention)

International (IPC 1-7): B01D25/36 B01D29/00 B01D29/10 B01D29/14

B01D29/16 B01D29/24 B01D29/38 B01D33/06 B01D35/00 B01D45/14

B01D46/00 B01D46/02 B01D46/04 B01D46/24

CPC: B01D46/4281 B01D2265/028 B01D46/0001 B01D46/0068

B01D46/04 B01D46/06 B01D2265/06 B01D46/0043

European: B01D46/00B B01D46/00G2C B01D46/00R40A B01D46/04

B01D46/04P B01D46/06 B01D46/42W L01D265/02S L01D265/06

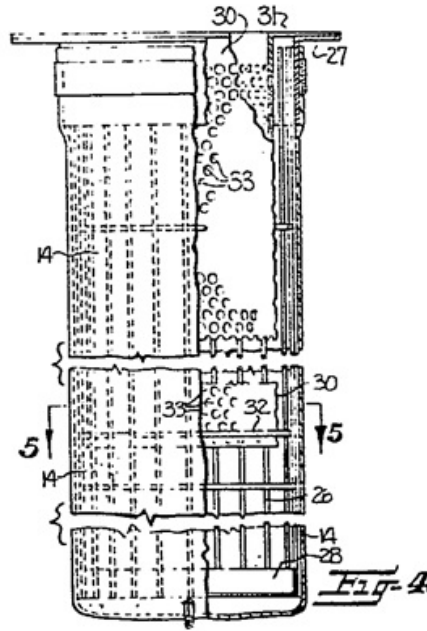
US: 55/302 55/341.1 55/379**JP F-Term:** 4D013 4D013/BE01 4D013/BE06 4D058 4D058/BE01

4D058/BE06 4D058/JA04 4D058/KB05 4D058/MA17 4D058/MA25

4D058/MA26 4D013/BB03 4D013/BD01 4D013/BF01 4D058/BB03

4D058/BD01 4D058/BF01 4D058/KA08 4D058/UA13

JP F-Index: B01D46/04/104 B01D46/04/103

**Family:**

Publication number	Publication date	Application number	Application date
AR220869 A1	19801128	AR19800282553	19800916
AR225539 A1	19820331	AR19810286441	19810814
AT11739 E	19850215	AT19810303579T	19810805
AT18013 E	19860315	AT19800303276T	19800917
AT6207 E	19840315	AT19800303481T	19801002
AU198062488 A1	19810409	AU19800062488	19800917
AU198062910 A1	19810409	AU19800062910	19801002
AU198174240 A1	19820225	AU19810074240	19810817
AU531746 B2	19830901	AU19800062488	19800917
AU532132 B2	19830915	AU19800062910	19801002
AU543088 B2	19850328	AU19810074240	19810817
BR8005958 A	19810331	BR19800005958	19800917
BR8105259 A	19820427	BR19810005259	19810817
CA1151081 A1	19830802	CA19800358929	19800825
CA1151083 A1	19830802	CA19800361420	19801001
CA1170999 A1	19840717	CA19810382596	19810727
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DD200216 A5	19830330	DD19810232635	19810817
DE3066618 D1	19840322	DE19803066618	19801002
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DK152017 C	19880711	DK19810003642	19810817
DK154006 B	19881003	DK19800003939	19800917
DK154006 C	19890220	DK19800003939	19800917
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DK393980 A	19810319	DK19800003939	19800917
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EP0026087 B1	19860219	EP19800303276	19800917
EP0027038 A1	19810415	EP19800303481	19801002
EP0027038 B1	19840215	EP19800303481	19801002
EP0046352 A1	19820224	EP19810303579	19810805
EP0046352 B1	19850213	EP19810303579	19810805
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ES495526 A2	19810812	ES19800495526	19800917
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ES8204300 A1	19820516	ES19810504788	19810817
FI75097 B	19880129	FI19800002900	19800916
FI75097 C	19880509	FI19800002900	19800916
FI75501 B	19880331	FI19810002540	19810817
FI75501 C	19880711	FI19810002540	19810817
FI802900 A	19810319	FI19800002900	19800916

FI812540 A	19820219	FI19810002540	19810817
HK94787 A	19871218	HK19870000947	19871210
HK94887 A	19871218	HK19870000948	19871210
IL60940 A0	19801026	IL19800060940	19800831
IL60940 A1	19831130	IL19800060940	19800831
IL63455 A0	19811030	IL19810063455	19810729
IL63455 A1	19860331	IL19810063455	19810729
IN152765 A	19840331	IN1980CA01062	19800917
IN154746 A	19841215	IN1981CA00852	19810729
JP1393139 C3	19870811	JP19810128118	19810814
JP1458092 C3	19880909	JP19800128466	19800916
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JP56051220 A2	19810508	JP19800138194	19801001
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NO802755 L	19810319	NO19800002755	19800917
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NO812772 L	19820219	NO19810002772	19810817
NZ194746 A	19830930	NZ19800194746	19800822
NZ197892 A	19850430	NZ19810197892	19810730
SG8790647 A	19880930	SG19870090647	19870813
SG8790649 A	19880520	SG19870090649	19870813
SU1037829 A3	19830823	SU19802986455	19800917
SU1037829 D	19830823	SU19802986455	19800917
US4231770 A	19801104	US19790076605	19790918
US4280826 A	19810728	US19790081461	19791003
US4289511 A	19810915	US19800171350	19800723
US4297115 A	19811027	US19800178847	19800818
ZA8005355 A	19811028	ZA19800005355	19800828
ZA8105219 A	19820825	ZA19810005219	19810729

Priority:

US19790076605 19790918	US19790081461 19791003	US19800171350 19800723
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Inventor(s): STREET ; JOHNSON JUN ALLEN S US ; JOHNSON JUN ; A S JOHNSON ; ALLEN STARLING DZHONSON MLADSHIJ US ; JOHNSON ALLEN STARLING JR DECEASED ; JOHNSON ALLEN STARLING JR DECEASED

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; SMART AND BIGGAR; DR YITZHAK HESS AND PARTNERS

Designated states: AT BE CH DE FR GB IT LI LU NL SE

Title: SISTEMA EXPERIMENTAL PARA DESHIDRATACION DE AFRECHO POR COMPRESION NEUMATICA EXPERIMENTAL SYSTEM TO DEHYDRATION by pneumatic compression bran (Machine translation)

Abstract: Source: CO20190002101U [ES] EQUIPO PARA DESHIDRATACION DE AFRECHO POR COMPRESION NEUMATICA RESUMEN.- Equipo para la filtracion de afrecho por compresion neumatica CARACTERIZADO PORQUE la separacion se logra usando fuerzas fisico-mecanicas (gravedad, presion, tiempo), en una unidad compuesta por: • Prensa Hidraulica (1) • Piston de desplazamiento vertical (2) • Armazon (3) • Cabezal (4) • Manometro Analogo (5) • Placa metalica (6) • Cesta o Camara De Prensado (7) • Colector (8) • Valvula de salida de liquido (9) • Palanca (10) • Tuberia de presion (11) • Placa de prensado (12), de la cesta de prensado (7) SECTOR TECNOLÓGICO.- La presente solicitud de Patente de Modelo de Utilidad se enmarca dentro del sector agroindustrial, en utilizar nuevos equipos para la producción y fabricación, principalmente en la producción de afrecho filtrado. El problema técnico que resuelve la presente solicitud es obtener producto con menor humedad, concentrando y mejorando su transporte y procesamiento a partir de la utilización de un solo equipo, de fácil manejo. ESTADO DE LA TÉCNICA ANTERIOR.- Dentro del estado de la técnica, la filtración por prensado es la operación que se utiliza para separar mezcla de fluidos-sólidos que implica el paso de la mayor parte del fluido a través de una barrera porosa que retiene las partículas sólidas contenidas en la mezcla (Perry y Green, 1997), la corriente valiosa procedente de un filtro puede ser el fluido, los sólidos o ambos productos. En algunos casos ambas corrientes carecen de valor (Mc Cabe y col, 1991). La separación se logra usando fuerzas físico-mecánicas (gravedad, centrífuga, presión), las cuales actúan sobre partículas o mezclas de partículas estableciendo una diferencia de presión que hace que el fluido pase a través de un medio filtrante que impiden el paso, de las partículas sólidas las que a su vez, se acumulan sobre la tela como torta porosa (Geankoplis, 1998a). Para que el proceso sea eficiente se utilizan filtros de presión, los cuales pueden crear una gran presión diferencial logrando una filtración rápida y económica con líquidos viscosos o con sólidos finos. Los tipos más comunes de filtros a presión son los llamados filtros prensa y los filtros de carcasa y hojas (Mc Cabe y col, 1991). El proceso de filtración por prensado es un método implementado para la industria de extracción de aceites, elaboración de cerveza siendo aplicado generalmente debido a su bajo costo inicial, operativo y eficiencia de extracción, además permite el uso de residuos como la torta seca, investigaciones anteriores han determinado que el rendimiento de extracción o separación sólido líquido durante este proceso depende principalmente de variables como el contenido de humedad, tamaño de partícula, temperatura de calentamiento, tiempo de calentamiento, presión aplicada y tiempo de prensado (Khan y Hannah, 1984; Mrema and Mc Nulty, 1985; Baryeh, 2001). DESVENTAJAS DEL ESTADO DE LA TÉCNICA.- La capacidad del equipo es pequeña, la presión del equipo se obtiene de forma manual comprimiendo un pistón con una palanca. VENTAJAS DE LA INVENCION.- El equipo integra un sistema de prensado eficiente, el cual recoge el líquido separado del sólido y se estudia la máxima presión que se le puede dar al material. Los filtros prensa tienen una operación muy sencilla, son un método simple y confiable para lograr una alta compactación. El filtro prensa puede comprimir y deshidratar sólidos hasta obtener del 25 percent al 60 percent por peso de los lodos compactados. El equipo permite reducir la contaminación generada por este tipo de material y se le da un mayor valor agregado y proporciona una nueva línea de estudio para la producción en la industria. RELACION DE FIGURAS UTILIZADAS.- Figura 1.- Vista isométrica frontal del equipo para deshidratación de afrecho (1), Figura 2.- Vista isométrica posterior del equipo (1), Figura 3.- Vista isométrica frontal del equipo (1) con la vista isométrica, separada, de la cesta (7), Figura 4.- Vista frontal del equipo para deshidratación de afrecho (1) RELACION DE SIGNOS UTILIZADOS.- 1. Equipo para deshidratación neumática 2. Pistón de desplazamiento vertical 3. Armazón 4. Cabezal 5. Manómetro analógico 6. Placa de acero 7. Cesta o cámara de prensado 8. Colector 9. Valvula de salida de líquido 10. Palanca donde se hace la fuerza que mueve el pistón (2) 11. Tubería de presión donde se coloca el manómetro (5) 12. Placa de prensado 13. Malla o tela (medio filtrante) 14. Tornillo 15. Paredes de la cesta (7) 16. Orificios de la cesta (7) 17. Costados 18. Entrada en la parte superior del pistón 19. Sistema hidráulico **Machine translation:** For dehydration of bran By pneumatic compression Equipment Summary. Equipment for filtration of bran By pneumatic compression characterized in that the separation is achieved using physical-mechanical forces (gravity, pressure, time), in a hydraulic press (1) unit composed of: • • vertical displacement piston (2) Frame (3) • Head (4) • • • metal plate (6) Analogue Pressure Gauge (5) • Basket or pressing chamber (7) • Manifold (8) liquid outlet valve (9) • • Lever (10) • Pressure Line (11) • caul plate (12), the basket (7) technological sector.- The present patent application for Utility Model is part of the agro-industrial sector, to use new equipment for the production and Manufacture, primarily in the production of afrecho filtrate. The technical problem solved by the present application is to obtain product with less moisture, concentrating and improving transport and processing from the use of a single machine, easy handling. State of the prior art.- within the state of the art, the filtration by pressing is the operation that is used to separate fluid-solid mixture that involves the steps of the majority of the fluid through a porous barrier that retains the solid particles contained in the mixture (Perry and Green, 1997), the current valuable from a filter can be the fluid, solids or both products. In some cases both currents lack of value (Mc should be et al., 1991). The separation is accomplished using physical-mechanical properties (gravity, centrifugal forces, pressure), which act on particles or mixtures of particles by establishing a pressure difference causes the fluid to pass through a filter media to prevent the passage of solid particles, which in turn, is accumulated on the fabric as porous cake (Geankoplis, 1998a). For the process to be efficient pressure filters are used, which can create a large differential pressure achieving a rapid filtration and economically with viscous liquids or with fine solids. The most common types of pressure filters are the so-called press filters, and filters for housing and sheets (Mc should be et al., 1991). The filtration process by pressing is a method implemented for the extraction of oils, brewing industry generally being applied due to its low initial cost, operational and extraction efficiency, also allows the use of waste as the dry cake, previous research has determined that the extraction yield or solid liquid separation during this process depends mainly on variables such as the moisture content, particle size, heating temperature, heating time, applied pressure and pressing time (Khan and Hannah, 1984; 1985; Baryeh, 2001 Nulty and Mc Mrema,). Disadvantages OF THE STATE OF THE art.- The capacity of the equipment is small, the pressure of the team manually is obtained by compressing a piston with a lever. Advantages of the invention.- The computer integrates a pressing system efficiently, which collects the liquid separated from the solid and the maximum pressure that can be given to the material. Press filters have a very simple operation, are a simple and reliable method to achieve a high compaction. The filter press may compress and dewater solids to obtain the 25 percent to 60 percent by weight of the sludge. The equipment allows to reduce the pollution generated by this type of material and is given a greater added value and provides a new line of study for the production in the industry. Figure 1 RELATIONSHIP OF Figures USED.- front isometric view of equipment for dehydration (1), Figure 2 bran.- Rear isometric view of the computer (1), Figure 3.- isometric view of the front of the computer (1) with the isometric view, separate, of the basket (7), Figure 4. Front View of equipment for dehydration (1) RELATIONSHIP OF SIGNS USED bran.- 1. For pneumatic dewatering equipment 2. 3 vertical displacement piston. Frame 4. 5 Head. 6 analog pressure gauge. Steel plate 7. Basket or the press chamber 8. 9 Manifold. Liquid outlet valve 10. Lever where is the force that moves the piston (2) 11. Pressure line where the pressure gauge (5) 12. Pressing Plate 13. Filter media mesh or fabric (14). Screw 15. Walls of the basket (7) 16. 17 holes of the basket (7). 18 sides. Entry at the top of the piston 19. Hydraulic System

Classifications:

International (IPC 8-9): B01D25/12 B01D25/34 B01D29/00 C02F9/02 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
CO20190002101 U1	20190909	CO20190002101U	20190305

Priority:

CO20190002101U 20190305

Probable Assignee: UNIV DE SUCRE

Assignee(s): (std): UNIV DE SUCRE

Assignee(s): UNIVERSIDAD DE SUCRE

Inventor(s): (std): AGUIRRE CHAMORRO JORGE ALFONSO ; CERVERA RICARDO MANUEL ANTONIO ; SALCEDO MENDOZA

7) Family number: 2863853 (US4806239A)

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Title: APPARATUS FOR SHIFTING FILTER PLATES IN A FILTER PRESS

Abstract: An apparatus for effecting the separation of filter plates within a filter press is disclosed. The apparatus includes a guide track having mounted thereon a slidably reciprocal carriage. The carriage includes at least one pivoted pawl having an abutment space defined thereon for contacting a filter plate to be transported. The pawl is held in a raised orientation by a resilient spring means. The carriage is driven along the guide track by means of a pressure displaced piston mechanically associated therewith. The piston is housed within a tubular member. Positioned within the tubular member are two pressure chambers, one on each end of the piston. Pressurized fluid is controllably introduced into one or the other of those chambers to effect a displacement of the piston. The pressure cylinder is of the type generally designated a rodless cylinder.

Classifications:

International (IPC 8-9): B01D25/12 B01D25/172 (Advanced/Invention);
B01D25/12 (Core/Invention)

International (IPC 1-7): B01D25/12 B01D25/15 B01D25/172 B01D25/34
B01D35/12 B30B7/02

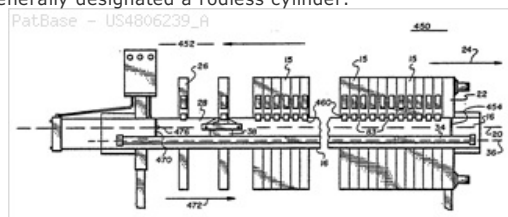
CPC: B01D25/172

European: B01D25/172

US: 100/198 100/199 210/225 210/230 210/231

JP F-Term: 4D018 4D018/AA22 4D018/BB23 4D018/BB28 4D018/CC01
4D018/CC04 4D116

JP F-Index: B01D25/15


Family:

Publication number	Publication date	Application number	Application date
AU198810452 A1	19880616	AU19880010452	19871125
AU619141 B2	19920116	AU19880010452	19871125
BRPI8707892 A	19900301	BR1987PI07892	19871125
CA1311962 A1	19921229	CA19870552996	19871127
DE0333762 T1	19901018	DE19880900193T	19871125
EP0333762 A1	19890927	EP19880900193	19871125
EP0333762 A4	19891012	EP19880900193	19871125
JP2501281 T2	19900510	JP19870500485T	19871125
KR19890700041 A	19890302	KR19880700891	19880727
KR19897000041 A	19890302	KR19887000891	19871125
MX169905 B	19930730	MX19870009504	19871127
NZ222727 A	19900426	NZ19870222727	19871127
PH24704 A	19901001	PH19870036135	19871127
US4806239 A	19890221	US19860936091	19861128
US5006241 A	19910409	US19890312910	19890221
US5064532 A	19911112	US19900580110	19900910
US5106499 A	19920421	US19900494224	19900315
WO8803832 A1	19880602	WO1987US03134	19871125
ZA8708948 A	19880524	ZA19870008948	19871127
ZM9487 A	19880829	ZM19870000094	19871127
ZW22287 A	19880608	ZW19870000222	19871127

Priority:

US19860936091 19861128	WO1987US03134 19871125	CA19870552996 19871127
US19890312910 19890221	US19900494224 19900315	US19900580110 19900910

Probable Assignee: BAKER HUGHES INC

Assignee(s): (std): ENVIROTECH CORP

Assignee(s): ENVIROTECH CORP MENLO PARK CALIF US ; BAKER HUGHES CORP ; BAKER HUGHES INC ; DAVIS STEVEN S ; ENVIROTECH A CORP OF DE CORP

Inventor(s): (std): DAVIS STEVEN S ; STEVEN STRINGHAM DAVIS ; STEVEN S DAVIS

Inventor(s): DAVIS S STEVEN FARMINGTON UT 84025 US ; DAVIS S

Agent(s): PHILLIPS ORMONDE FITZPATRICK; OYEN WIGGS GREEN AND MUTALA LLP

Designated states: AT AU BE BR CH DE FI FR GB IT JP KR LI LU NL SE

8) Family number: 12846901 (US5292434A)

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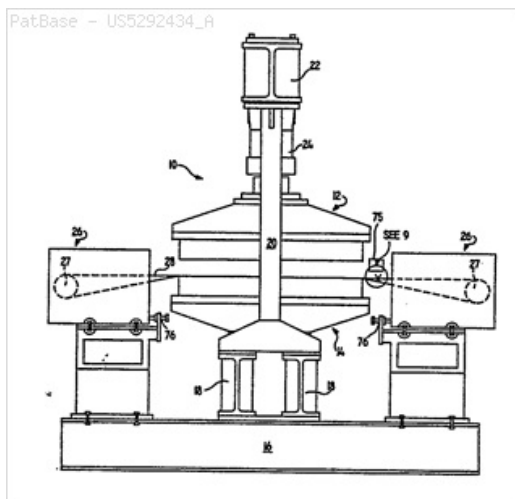
Title: FILTER APPARATUS AND METHOD USING BELT FILTER MEDIUM

Abstract: A filter apparatus and method is disclosed for separating solid materials from liquid materials in a slurry fluid. The apparatus includes separable plate members that are pressed against each other to form a filter chamber. The plates have mating surfaces and hollow interior portions that create the chamber. A filter medium is placed between the mating surfaces before the plates are closed. The apparatus includes means for forcing wash fluids, liquids or gasses through the slurry to force the fluids from the slurry and to produce a dry filter cake of the solids. After the filtration has been completed, the plates are separated leaving the filter cake on the filter medium and the filter medium is advanced out of the filter chamber moving a clean filter medium between the open filter plates. Another filter operation then proceeds. The filter medium is cleaned outside of the filter apparatus and can be prepared for reuse.

Classifications:

International (IPC 8-9): B01D25/00 B01D25/127 B01D25/28 B01D29/09
B01D29/60 B01D29/70 B01D29/84 B01D29/96 (Advanced/Invention)

International (IPC 1-7): B01D24/46 B01D25/00 B01D25/12 B01D25/127 B01D25/28 B01D29/09 B01D29/60 B01D29/70 B01D29/78 B01D29/84 B01D29/96 B01D33/04 B01D37/00
CPC: B01D25/1275 B01D29/096 B01D25/284 B01D25/28 B01D29/60 B01D29/606 B01D29/78 B01D29/843
European: B01D25/127B B01D25/28D1 B01D29/09C
US: 100/198 210/224 210/227 210/231 210/387 210/388 210/393 210/400 210/500.1 210/770 210/791 210/90 210/91



Family:

Publication number	Publication date	Application number	Application date
AU199342776 A1	19931108	AU19930042776	19930401
CA2133757 AA	19941005	CA19932133757	19930401
CA2133757 C	20041019	CA19932133757	19930401
US5292434 A	19940308	US19920864524	19920407
US5462677 A	19951031	US19930167559	19931213
US5510025 A	19960423	US19940316120	19940930
US5573667 A	19961112	US19950466338	19950606
WO9319830 A1	19931014	WO1993US03100	19930401

Priority:

US19920864524 19920407 WO1993US03100 19930401 US19930167559 19931213
US19940316120 19940930 US19950466338 19950606

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Assignee(s): FLSMIDTH A S

Inventor(s): (std): BENESI STEVE C

Inventor(s): STEVE C BENESI

Agent(s): SMART AND BIGGAR

Designated states: AT AU BB BE BG BR CA CH CZ DE DK ES FI FR GB GR HU IE IT JP KP KR LK LU MC MG MN MW NL NO NZ PL PT RO RU SD SE SK UA US

9) Family number: 66935966 (US2017259197A)

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Title: DYNAMIC SEPARATION AND FILTRATION

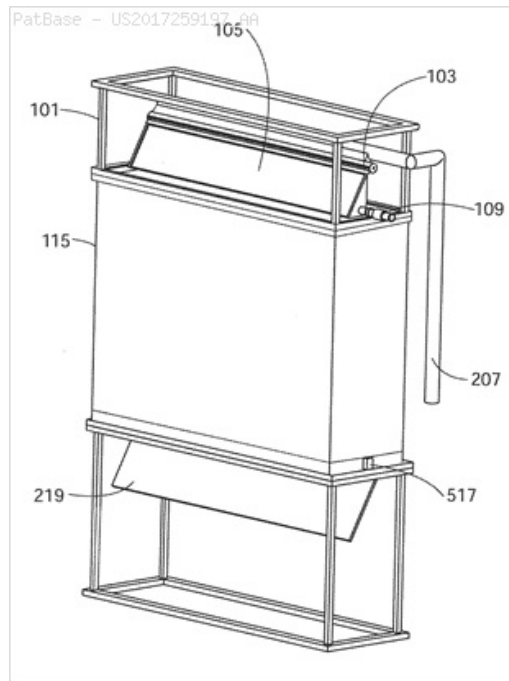
Abstract: A modular, compact, mobile, dewatering and liquid-liquid separation and filtration system. The system processes incoming influents of slurries, solids and liquids at a high speed of operation and in large volumes. System is capable of being modularly scaled, allowing for a continuous steady state operation accommodating any slurry flow rate in a synchronous dynamic equilibrium process. Components and modules integrated into the system include a dynamic filtration clarifier **101** (DFC), a nested-filter dewatering cell **115** (NDC) and/or a compression filter press **125** (CFP). The DFC performs the primary dewatering phase of separating the primary water from the solids creating sludge. The NDC further breaks apart the solids of the sludge, removing interstitial water in a secondary dewatering phase, further lowering the moisture content of the sludge, while the CFP removes the tertiary water from the remaining solid particles by pressing the particles into a solid cake.

Classifications:

International (IPC 8-9): B01D24/14 B01D24/40 B01D24/46 B01D25/00 B01D25/02 B01D25/12 B01D25/127 B01D25/164 B01D29/11 B01D29/13 B01D29/23 B01D29/52 B01D29/60 B01D29/64 B01D29/76 B01D33/052 B01D33/64 B01D33/70 B01D33/74 B01D33/76 B01D36/02 B01D61/18 B30B9/04 C02F1/00 C02F11/12 C02F11/122 (Advanced/Invention); B01D61/00 (Advanced/Non-invention)

CPC: B01D36/003 B01D24/14 B01D24/40 B01D24/46 B01D35/303 B01D29/661 B01D29/72 B01D29/822 B30B9/045 B30B9/22 C02F2201/007 B01D25/00 B01D25/127 B01D25/164 B01D29/96 B01D61/00 B01D61/18 C02F1/004 C02F11/122 B01D25/02 C02F2201/008 B30B9/225

US: 1/1 210/767



Family:

Publication number	Publication date	Application number	Application date
US2017259197 AA	20170914	US20170452939	20170308
US2017296946 AA	20171019	US20170636830	20170629
US10526229 BB	20200107	US20170452939	20170308
WO17156073 A1	20170914	WO2017US21287	20170308
WO19006367 A1	20190103	WO2018US40398	20180629

Priority:

US20160305025P 20160308 US20170452939 20170308 US20170636830 20170629

Probable Assignee: VTECH INNOVATIVE SOLUTIONS LLC

Assignee(s): (std): VTECH INNOVATIVE SOLUTIONS LLC

Inventor(s): (std): VETTE PAUL

Agent(s): SCHMEISER OLSEN AND WATTS LLP; OLSEN ARLEN

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 JO 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

10) Family number: 2878996 (WO8800082A1)

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Title: ROTARY DISC FILTER

Abstract: Rotary disc filter, in which the discs are provided with a pressing system and are anchored on a common shaft. The filter can be used both for dynamic and static filtering. The intermediate spaces between the individual discs can be closed and individual filter discs can be mounted rotatably on the common shaft, whereas other discs are fitted so as to rotate together with the common shaft. The filters themselves may be arranged in multiple units on a supporting structure similar to a Ferris wheel and may be immersed together with the structure in a sludge chamber. External extraction devices enable the filter cake to be withdrawn automatically.

Classifications:

International (IPC 8-9): B01D25/12 B01D25/168 B01D29/41

B01D33/00 (Advanced/Invention);

B01D25/12 (Advanced/Non-invention);

B01D25/12 B01D29/39 B01D33/00 (Core/Invention);

B01D (Subclass/Invention)

International (IPC 1-7): B01D25/12 B01D29/39 B01D33/26 B01D33/36

CPC: B01D33/21 B01D29/41 B01D29/6446 B01D29/6476 B01D29/70

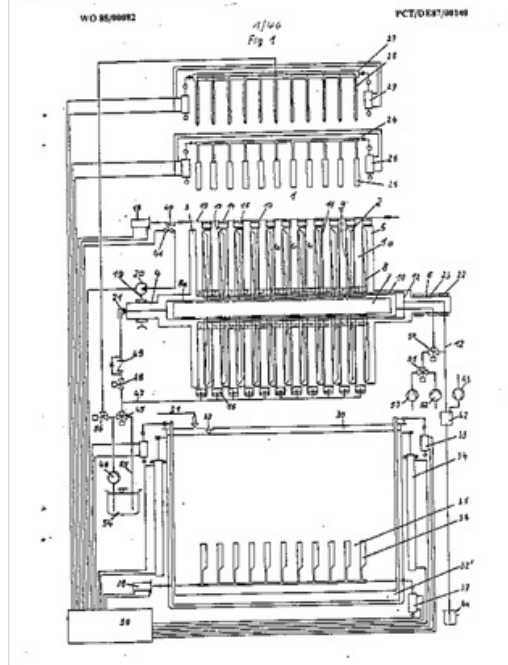
B01D29/78 B01D29/822

European: B01D29/41 B01D33/00A1A8 B01D33/00A1B26

B01D33/00A2A B01D33/26 B01D33/26+/08+/36

JP F-Term: 4D018 4D018/BB00 4D018/BB02 4D018/BB13 4D116

JP F-Index: B01D25/12/Z

**Family:**

Publication number	Publication date	Application number	Application date
AU198771680 A1	19880129	AU19870071680	19870328
BRPI8707735 A	19890815	BR1987PI07735	19870328
DE3622103 A1	19880225	DE19863622103	19860702
DE3622103 C2	19910411	DE19863622103	19860702
DK112788 A	19880302	DK19880001127	19880302
DK112788 A0	19880302	DK19880001127	19880302
EP0313553 A1	19890503	EP19870902063	19870328
FI886040 A	19881230	FI19880006040	19881230
HU47871 A2	19890428	HU19870002095	19870328
JP1502803 T2	19890928	JP19870506953T	19870328
KR19887001579 A	19881103	KR19887000235	19870328
NO880899 A	19880428	NO19880000899	19880301
NO880899 A0	19880301	NO19880000899	19880301
NO880899 L	19880428	NO19880000899	19880301
WO8800082 A1	19880114	WO1987DE00140	19870328

Priority:

DE19863622103 19860702 WO1987DE000140 19870328 WO1987DE00140 19870328

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Inventor(s): ALFONS SCHOTTEN ; SCHOTTEN ALFONS DE

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD

Designated states: AT AU BE BG BJ BR CF CG CH CM DE DK FI FR GA GB HU IT JP KR LI ML MR NL NO RO SE SN SU TD TG US