

Search history

Search [SP]: The invention relates to a device for collecting water from atmospheric air. The collector device of the invention comprises a first venturi and a second venturi, each having an inlet and an outlet. The second venturi is connected to the outlet of the first venturi. The device also includes a fan disposed operationally in the inlet of the first venturi and a vortex tube. The vortex tube comprises: an inlet connected to the outlet of the second venturi; a first side outlet in communication with the atmosphere; and a second side outlet. The collector device further comprises a coil having an inlet port connected to the second side outlet of the vortex tube, and an outlet port; and adsorption means located inside the coil. (Results 111)

Search ic=(E03B OR B01D) (Results 932648)

2:

Search 1 and 2 (Results 35)

3:

1) Family number: 22163001 (US2805560A)

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Title: METHOD AND APPARATUS FOR CONDENSING MOISTURE

Abstract: (Claim 1) 1. Having thus described my invention, what I claim is: An apparatus for collecting atmospheric moisture which comprises a tower, a windmill upon the tower, an electric generator actuated by the windmill, a 'condenser mounted in elevated position upon the tower for directing a current of air through the condenser, a tank mounted in elevated position upon the tower arranged to receive 'condensate from the condenser, a refrigerating system having interconnected sets of heat transfer coils positioned underground and in the tank and provided with chilling coils 'associated with the condenser, a pump for circulating refrigerant through the refrigerating system, and means energized by the generator for actuating the pump.

Classifications:

International (IPC 8-9): B01D5/00 E03B3/28 (Advanced/Invention);
B01D5/00 E03B3/00 (Core/Invention)
International (IPC 1-7): E03B3/28
CPC: Y02A20/109 E03B3/28 B01D5/0039
European: B01D5/00F12 E03B3/28
US: 62/260 62/291



Family:

Publication number	Publication date	Application number	Application date
US2805560 A	19570910	US19560575579	19560402

Priority:

US19560575579 19560402

Probable Assignee:

GEORGE BERESFORD

Assignee(s): (std):

GEORGE BERESFORD

Inventor(s): (std):

GEORGE BERESFORD

Inventor(s):

BERESFORD GEORGE

2) Family number: 2893094 (US4904347A)

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Abstract: A liquid product (4) leaving a furnace (2) is introduced into a series of cyclone separators (5, 6, 7). The liquid product to be vaporized is introduced tangentially into the top portion (5a, 6a, 7a) of each cyclone to place the product into contact with a side wall (5b, 6b, 7b) of the cyclone. A gaseous phase (11, 12, 13) formed in each cyclone is collected in the central zone (8, 9, 10) of the cyclone and is then introduced into a vacuum distillation column (3). The liquid phase obtained in each cyclone is collected at the bottom (5c, 6c, 7c) of the cyclone and then is introduced tangentially into the top (6a, 7a) of the following cyclone or, in the case of the last cyclone, is introduced directly into the vacuum distillation column (3). The side wall (5b, 6b, 7b) of each cyclone (5, 6, 7) is heated to a temperature near the maximum temperature allowable for avoiding all thermal deterioration of the product. The invention is particularly useful for processing the residue obtained from atmospheric distillation columns of crude petroleum refineries.

Classifications:

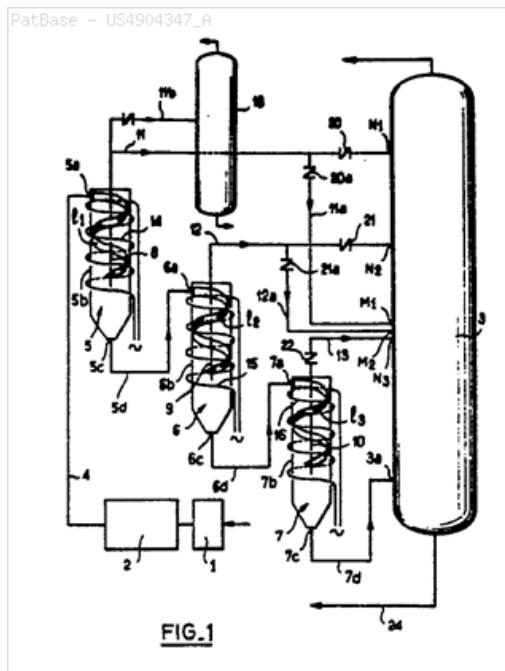
International (IPC 8-9): B01D3/06 B01D3/10 B01D3/14 C10G31/10 C10G7/06 (Advanced/Invention); B01D3/00 B01D3/10 B01D3/14 C10G31/00 C10G7/00 (Core/Invention)

International (IPC 1-7): B01D3/06 B01D3/10 B01D3/14 B04C5/04 B04C5/20 B04C5/26 B04C9/00 C10G31/10 C10G7/06

CPC: Y10S159/16 Y10S203/09 Y10S203/11 B01D3/143 B01D3/10 C10G7/06 C10G31/10

European: B01D3/10 B01D3/14B C10G31/10 C10G7/06

US: 159/13.1 159/6.1 159/DIG.16 196/114 202/173 202/176 202/205 202/254 202/261 202/262 203/100 203/73 203/DIG.9 208/356 208/367

**Family:**

Publication number	Publication date	Application number	Application date
AT68365 E	19911115	AT19870402920T	19871218
DE3773888 D1	19911121	DE19873773888	19871218
EP0275770 A1	19880727	EP19870402920	19871218
EP0275770 B1	19911016	EP19870402920	19871218
ES2025193 B3	19920316	ES19870402920T	19871218
FR2608451 A1	19880624	FR19860017816	19861219
FR2608451 B1	19901221	FR19860017816	19861219
GR3002930 T3	19930125	GR19910401557T	19911017
JP63254189 A2	19881020	JP19870319103	19871218
US4904347 A	19900227	US19870134036	19871217

Priority:

FR19860017816 19861219 EP19870402920 19871218 EP19870402920 19871218

Probable Assignee: GESILEC

Assignee(s): (std): ELECTRICITE DE FRANCE ; ELECTRICITE DE FRANCE SERVICE NAT ; SPIE BATIGNOLLES S A FRANCAISE ; SPIE BATIGNOLLES ; SPIE BATIGNOLLES SOCIETE ANONYME

Assignee(s): SPIE BATIGNOLLES FRANCAISE PUTEAUX FR SA ; SPIE BATIGNOLLES TOUR ANJOU ; SPIE BATIGNOLLES SOC ANONYME ; SPIE BATIGNOLLES S A FRANCAISE PUTEAUX FR ; SUPII BATEINIYOOLE ; SPIE BATIGNOLLES FRENCH CO ; ELECTRICITE DE FRANCE SERVICE NATIONAL ; ELECTRICITE DE FRANCE SERVICE NATIONAL PARIS FR ; GESILEC

Inventor(s): (std): CROS PIERRE ; DAUMAS CHRISTIAN ; PIEERU KURO ; KURISUCHIYAN DOMA

Inventor(s): CHRISTIAN DAUMAS ; DAUMAS CHRISTIAN F 75016 PARIS FR ; PIERRE CROS

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

3) Family number: 3251083 (US5139764A)

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Title: Sulfur recovery process for ammonia-containing feed gas

Abstract: Ammonia-containing sour gas is combusted at high flame temperature with at least 90 percent purity oxygen in an externally cooled combustor, the ammonia-free product is cooled, then, in conjunction with additional acid gas which does not contain ammonia, is passed to a Claus furnace wherein less than one-third of the hydrogen sulfide is combusted with oxygen enriched air enabling boosting sulfur recovery in a Claus plant without detrimental effects on catalyst life, furnace refractories and pressure drops.

Classifications:

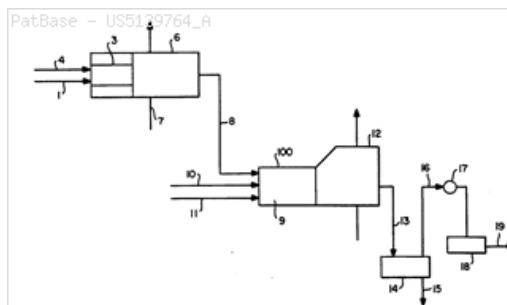
International (IPC 8-9): C01B17/04 (Advanced/Invention); C01B17/00 (Core/Invention)

International (IPC 1-7): B01D53/34 C01B17/02 C01B17/04 F23C9/06 F23D14/32

CPC: C01B17/0417 C01B17/0421

European: C01B17/04B2B C01B17/04B2D

US: 422/160 423/574.1 423/574R 431/9



Family:

Publication number	Publication date	Application number	Application date
BRPI8900251 A	19890919	BR1989PI00251	19890119
BRPI9100352 A	19911022	BR1991PI00352	19910128
CA2035093 AA	19910730	CA19912035093	19910128
CA2035093 C	19970401	CA19912035093	19910128
DE69102778 D1	19940818	DE19916002778	19910128
DE69102778 T2	19950223	DE19916002778T	19910128
EP0325286 A2	19890726	EP19890100998	19890120
EP0325286 A3	19910508	EP19890100998	19890120
EP0440141 A2	19910807	EP19910101086	19910128
EP0440141 A3	19920205	EP19910101086	19910128
EP0440141 B1	19940713	EP19910101086	19910128
ES2056501 T3	19941001	ES19910101086T	19910128
JP1308811 A2	19891213	JP19890010055	19890120
JP4214013 A2	19920805	JP19910025088	19910128
JP8005647 B4	19960124	JP19910025088	19910128
KR19890011624 A	19890821	KR19890000579	19890120
KR19910014306 A	19910831	KR19910001441	19910128
KR960010777 B1	19960808	KR19910001441	19910128
US5139764 A	19920818	US19910708009	19910524

Priority:

US19870146721 19870121 US19880146721 19880121 US19900471973 19900129
US19910708009 19910524

Probable Assignee: PRAXAIR TECHNOLOGY INC

Assignee(s): (std): UNION CARBIDE CORP ; UNION CARBIDE IND GASES TECH ; PRAXAIR TECHNOLOGY INC

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Inventor(s): SZEKELY ANDREW GEZA YORKTOWN HEIGHTS N Y 10598 US ; ANDREW GEZA SZEKELY

Designated states: BE DE ES FR GB IT

4) Family number: 15434293 (WO0142393A1)

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Title: PETROLEUM PROCESSING METHOD AND DEVICE THEREFOR

Abstract: A petroleum processing method for separating stock oil into an atmospheric distillate, a vacuum distillate and a vacuum residue on distillation, characterized by comprising (i) an atmospheric distillation step for atmospheric-distilling a stock oil for separation into an atmospheric distillate and an atmospheric residue on distillation and (ii) a vacuum distillation step for vacuum-distilling the atmospheric residue on distillation without heating for separation into a vacuum distillate and a vacuum residue on distillation, whereby a method and device for economically obtaining a vacuum distillate from an atmospheric residue on distillation without heating the latter are provided.

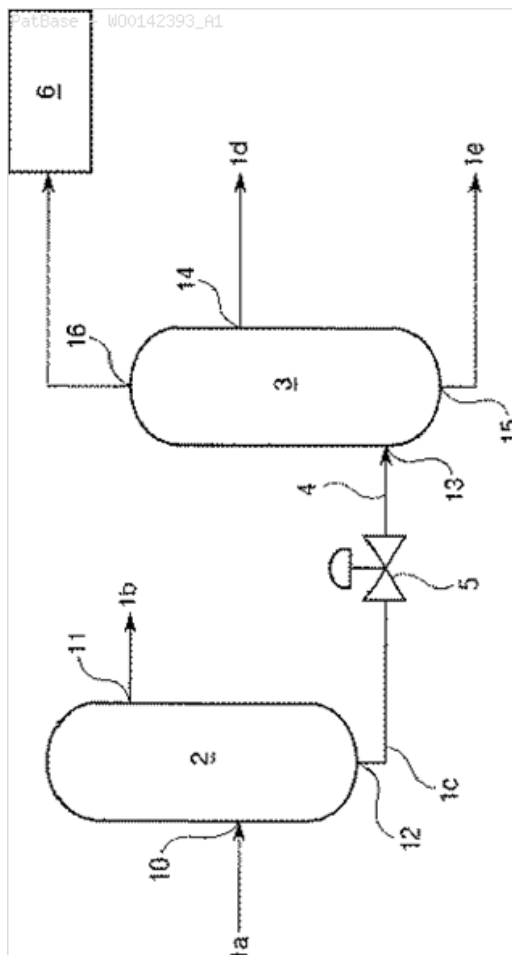
Classifications:

International (IPC 8-9): B01D3/10 B01D3/14 C10G53/02 C10G67/02 C10G7/00 C10G7/06 C10L1/04 (Advanced/Invention); C10G7/06 (Advanced/Non-invention); B01D3/10 B01D3/14 C10G53/00 C10G67/00 C10G7/00 C10L1/00 (Core/Invention)

International (IPC 1-7): B01D3/10 B01D3/14 C10G 65/04 C10G65/04 C10G67/00 C10G67/02 C10G67/06 C10G7/00 C10G7/06 C10L1/04

CPC: B01D3/10 B01D3/146 C10G53/02 C10G67/02 C10G7/06

European: B01D3/10 B01D3/14B2 C10G53/02 C10G67/02 C10G7/06



Family:

Publication number	Publication date	Application number	Application date
BRPI9917568 A	20020806	BR1999PI17568	19991210
EP1249485 A1	20021016	EP19990959757	19991210
EP1249485 A4	20040407	EP19990959757	19991210
IN197661 B	20080912	IN2002DN00676	20020708
JP2000044967 A2	20000215	JP19980219179	19980803
JP2001042393 A1	20030603	JP20010543679T	19991210
KR20020051940 A	20020629	KR20027007015	19991210
RU2002118597 A	20040110	RU20020118597	19991210
RU2214440 C1	20031020	RU20020118597	19991210
TH43068 A	20010213	TH19991004748	19991217
TR200201517 T2	20030121	TR20020001517T	19991210
TW580515 B	20040321	TW19990121850	19991214
WO0142393 A1	20010614	WO1999JP06950	19991210

Priority:

JP19980219179 19980803 WO1999JP06950 19991210

Probable Assignee: JGC CORP

Assignee(s): (std): DZHGK CORP ; DZHGK KORPOREJSHN ; JGC CORP ; KATOH YOSHIO ; OKADA TSUYOSHI ; SUGIMOTO AKIRA ; KUBO MASATOSHI

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Inventor(s): YOSHIO KATOH ; TSUYOSHI OKADA ; MASATOSHI KUBO ; AKIRA SUGIMOTO ; TSU OSHI OKADA ; OSHIO KATOH

Agent(s): SUZUKI SHUNICHIRO

Designated states: BR DE FR GB IN JP KR RU SG TR US

5) Family number: 31492406 (US2005061744A)

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Title: METHOD FOR THE RECOVERY OF ACIDS FROM HYDROMETALLURGY PROCESS SOLUTIONS

Abstract: A method for the recovery of acids and other materials from hydrometallurgic process solutions comprising processing said solutions utilizing a simulated moving bed chromatographic method to produce at least two product streams.

Classifications:

International (IPC 8-9): B01D15/00 B01D15/08 B01D15/36

B01J39/00 B01J49/00 C02F1/28 C02F1/42 (Advanced/Invention);

B01D B01J C02F (Subclass/Invention)

International (IPC 1-7): B01D15/00 B01J39/00 B01J49/00 C02F1/28

C02F1/42

CPC: B01D15/185 B01D15/363 C02F1/42 C02F2101/20

European: B01D15/18R2C L01D15/36B4 M02F1/42 M02F101/20



Family:

Publication number	Publication date	Application number	Application date
CA2528171 AA	20051202	CA20042528171	20040709
CA2528171 C	20111206	CA20042528171	20040709
US2005061744 AA	20050324	US20040888141	20040709
US2008093302 AA	20080424	US20070999979	20071206
US2012160772 AA	20120628	US20120407519	20120228
US8741146 BB	20140603	US20120407519	20120228
WO05009578 A2	20050203	WO2004US22432	20040709
WO05009578 A3	20050623	WO2004US22432	20040709
ZA200510096 A	20070328	ZA20050010096	20051212

Priority:

US20030487767P	20030716	US20040888141	20040709	WO2004US22432	20040709
US20070999979	20071206	US20120407519	20120228		

Probable Assignee: AMALGAMATED RESEARCH INC

Assignee(s): (std): AMALGAMATED RES INC ; AMALGAMATED RES LLC ; KEARNEY MICHAEL M ; MUMM MICHAEL W ; VELASQUEZ LAWRENCE ; JACOB WILLIAM IV ; JACOB IV WILLIAM

Assignee(s): JACOB WILLIAM ; AMALGAMATED RESEARCH INC ; AMALGAMATED RESEARCH LLC

Inventor(s): (std): JACOB WILLIAM ; JACOB WILLIAM IV ; KEARNEY MICHAEL M ; LAWRENCE VELASQUEZ ; MUMM MICHAEL W ; VELASQUEZ LAWRENCE ; JACOB IV WILLIAM

Inventor(s): MUMM MICHAEL ; KEARNEY MICHAEL

Agent(s): OYEN WIGGS GREEN AND MUTALA LLP; TRASK BRITT; TRASKBRITT 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
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 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

6) Family number: 32451885 (US2005267224A)

Title: METHOD OF GENERATING HYDROCARBON REAGENTS FROM DIESEL, NATURAL GAS AND OTHER LOGISTICAL FUELS

Abstract: The present invention provides a process for producing reagents for a chemical reaction by introducing a fuel containing hydrocarbons into a flash distillation process wherein the fuel is separated into a first component having a lower average molecular weight and a second component having a higher average molecular weight. The first component is then reformed to produce synthesis gas wherein the synthesis gas is reacted catalytically to produce the desired reagent.

Classifications:

International (c 8-9): B01D3/06 C01B3/26 C01B3/38 C07B63/02 C07C27/00 C07C27/26 C07C29/151 C07C41/01 C10G15/00 C10G2/00 C10G31/06 C10G35/04 C10G45/00 C10G9/00 C21D10/00 H01M8/06 (Advanced/Invention); B01D3/00 C01B3/00 C07B63/00 C07C27/00 C07C29/00 C07C41/00 C10G15/00 C10G2/00 C10G31/00 C10G35/00 C10G45/00 C10G9/00 C21D10/00 H01M8/06 (Core/Invention)

International (IPC 1-7): C01B3/26 C07B63/02 C07C27/26

CPC: C21D1/04 C21D10/005 C23C26/02 B01D3/06 C01B3/386
C01B2203/0261 C01B2203/061 C01B2203/085 C01B2203/1047
C01B2203/107 C01B2203/1241 C01B2203/1247 C01B2203/1288
C01B2203/1619 C07C29/1518 C07C41/01 C10G2/30 C10G31/06

European: B01D3/06 C01B3/38D C07C29/151B C07C29/151B1

C07C41/01 C10G2/30 C10G31/06 C21D1/04 C21D10/00L

C23C26/02 M01B203/02D4 M01B203/06B M01B203/08B6

M01B203/10D2 M01B203/10D2D2 M01B203/12B2D2

M01B203/12B2D4 M01B203/12H M01B203/16F2

US: 148/558 208/106 208/133 208/134 208/208R 208/361 423/133 423/6526 423/17 423/125 518/700 518/702 518/703 518/704

423/652S 429/17 429/425 518/700 518/726 518/726P 568/671 568/671S



Fig. 1

Family:

Publication number	Publication date	Application number	Application date
EP1753843 A2	20070221	EP20050856710	20050513
EP1950267 A1	20080730	EP20070022855	20050513
US2005267224 AA	20051201	US20050128488	20050512
US2009007996 AA	20090108	US20080208111	20080910

US2009011291 AA	20090108	US20080210741	20080915
US7435760 BB	20081014	US20050128488	20050512
US7744751 BB	20100629	US20080210741	20080915
WO06076023 A2	20060720	WO2005US16790	20050513
WO06076023 A3	20070419	WO2005US16790	20050513
WO06076023 C2	20070118	WO2005US16790	20050513

Priority:

US20040571457P 20040514 US20050128488 20050512 EP20050856710 20050513
WO2005US16790 20050513 US20080208111 20080910 US20080210741 20080915

Probable Assignee: BATTELLE MEMORIAL INST

Assignee(s): (std): BATTELLE MEMORIAL INST ; BATTELLE MEMORIAL INSTITUTE ; HERLING DARRELL R ; ROZMIAREK ROBERT T ; RAPPE KENNETH G ; WANG YONG ; HOLLADAY JAMELYN D ; AARDAHL CHRIS L

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Inventor(s): (std): AARDAHL CHRIS L ; HERLING DARRELL R ; HOLLADAY JAMELYN D ; RAPPE KENNETH G ; ROZMIAREK ROBERT T ; WANG YONG ; PARK WALTER R ; MUNLEY JOHN T ; JOHNSON ROGER N ; BAILEY JEFFREY A

Inventor(s): AARDAHL CHRIS ; ROZMIAREK ROBERT ; RAPPE KENNETH ; HOLLADAY JAMELYN ; HERLING DARRELL

Agent(s): BRADLEY ADRIAN; BATTELLE MEMORIAL INSTITUTE, ATTN: IP SERVICES K1-53; BATTELLE MEMORIAL INST ATTN IP SERVICES K1 53; MAUGHAN DEREK H; DEREK H

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

7) Family number: 34245856 (US2007044659A)

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Title: METHOD FOR TREATING BYPRODUCTS OF SOUR WATER STRIPPER PROCESS

Abstract: A method for treating a waste product from a chemical processing plant. Chemical processing plants such as oil refineries produce sour water waste that includes ammonia and hydrogen sulfide. The sour water is typically steam stripped to form a vapor stream including water, the ammonia and the hydrogen sulfide. The vapor stream is converted into a concentrated ammonium sulfide solution using a scrubber unit that includes a cooling and quenching column. Concentrating the byproducts provides for more efficient transportation of the concentrate from several refineries to a remote, centralized purification facility.

Classifications:

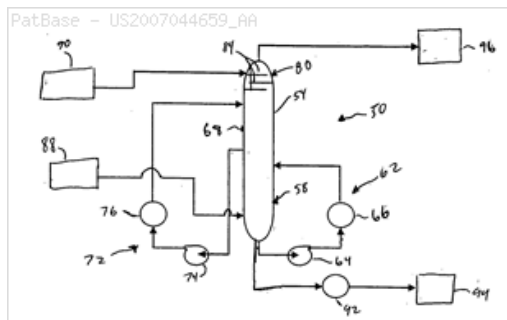
International (IPC 8-9): B01D19/00 (Advanced/Invention);

B01D19/00 (Core/Invention)

CPC: B01D3/38 C02F1/048

European: B01D3/38 C02F1/04Z

US: 423/413 95/158 95/254 95/264



Family:

Publication number	Publication date	Application number	Application date
US2007044659 AA	20070301	US20050234056	20050923
US7537643 BB	20090526	US20050234056	20050923

Priority:

US20050711574P 20050826 US20050234056 20050923

Probable Assignee: TESSENDERLO KERLEY INC

Assignee(s): (std): BAILEY CLARK ; BIERLE ALLEN D ; BIERLE SCOTT A ; ELLIOT FRED ; NEYLON RICHARD ; PCS NITROGEN FERTILIZER LP

Assignee(s): TESSENDERLO KERLEY INC

Inventor(s): (std): NEYLON RICHARD ; ELLIOT FRED ; BIERLE SCOTT A ; BIERLE ALLEN D ; BAILEY CLARK

Inventor(s): BIERLE ALLEN ; BIERLE SCOTT

Agent(s): MARK D SWANSON PAULEY PETERSEN AND ERICKSON; PAULEY PETERSEN AND ERICKSON

8) Family number: 34544893 (US2008289352A)

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Title: MACHINE FOR PRODUCING WATER FORM WIND ENERGY

Abstract: A wind machine for producing water by condensation, includes a wind rotor, an air-dehumidifying unit and at least one electric power generation unit, these being supported by a tower anchored in the ground, the dehumidifying unit including at least one refrigeration compressor, at least one condenser and at least one evaporator that are connected together by a refrigerant fluid circuit, incorporating a member for expanding the fluid, the machine furthermore including elements for recovering and storing condensed water vapour. The at least one electric power generation unit is mechanically coupled directly to the wind rotor via its rotation shaft. The wind machine includes a device for storing and recovering the electric power thus generated and a device for automatically controlling and regulating the dehumidifying unit.

Classifications:

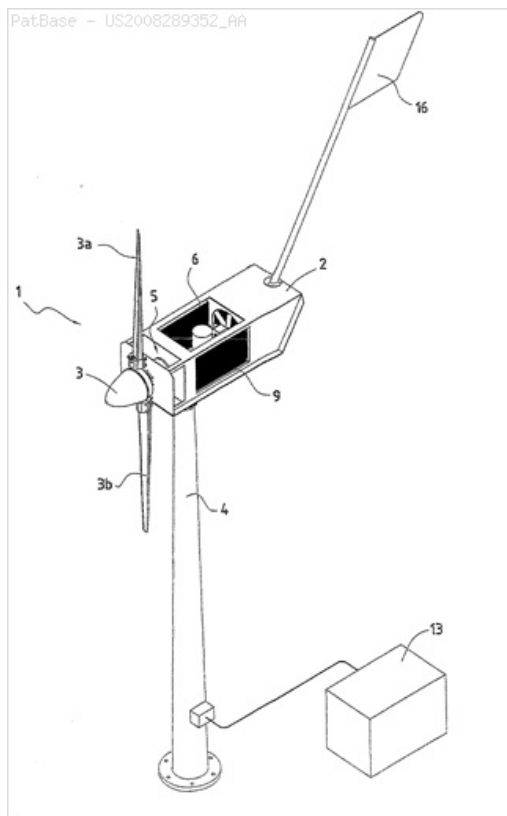
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F25B27/00 F25B39/04 F25B49/02 F25D17/06

F25D21/14 (Advanced/Invention);

B01D53/26 E03B3/00 F03D9/00 F25B27/00 F25B39/04

F25B49/02 (Core/Invention);
E03B (Subclass/Invention)
International (IPC 1-7): E03B3/28
CPC: E03B3/28 B01D53/26 F03D9/00 F05B2260/20 Y02E10/72
Y02P90/50 Y02A20/109 F03D9/25 F03D9/11
European: B01D53/26 E03B3/28 F03D9/00 F03D9/02B R05B260/20
Y02E10/72H
US: 290/55 290/55S 62/291 62/291P



Family:

Publication number	Publication date	Application number	Application date
AU2006319085 AA	20070607	AU20060319085	20061128
AU2006319085 BB	20120412	AU20060319085	20061128
CN101316969 A	20081203	CN200680044585	20061128
CN101316969 B	20110330	CN200680044585	20061128
EP1960606 A1	20080827	EP20060841815	20061128
FR2893959 A1	20070601	FR20050012052	20051129
FR2893959 B1	20100219	FR20050012052	20051129
IL191324 A1	20131031	IL20060191324	20061128
IN04616DN2008 A	20080926	IN2008DN04616	20080529
US2008289352 AA	20081127	US20060095324	20061128
US8820107 BB	20140902	US20060095324	20061128
WO07063208 A1	20070607	WO2006FR02602	20061128

Priority:

FR20050012052 20051129 WO2006FR02602 20061128

Probable Assignee: MARC PARENT

Assignee(s): (std): HUGUES PARENT MARC ; MARC HUGUES PARENT ; MARC PARENT ; PARENT MARC ; PARENT MARC HUGUES

Inventor(s): (std): PARENT MARC HUGUES ; HUGUES PARENT MARC

Inventor(s): MARC HUGUES PARENT ; PARENT MARC

Agent(s): CALLINANS; FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; DECOBERT JEAN PASCAL ET AL; CABINET HAUTIER; REINHOLD COHN AND PARTNERS; YOUNG AND THOMPSON

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

9) Family number: 41742769 (US2008093260A)

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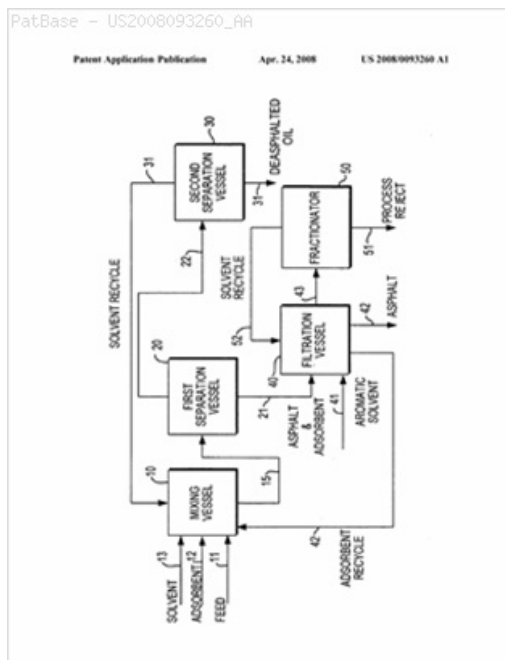
Title: ENHANCED SOLVENT DEASPHALTING PROCESS FOR HEAVY HYDROCARBON FEEDSTOCKS UTILIZING SOLID ADSORBENT

Abstract: A solvent deasphalting of crude oil or petroleum heavy fractions and residues is carried out in the presence of a solid adsorbent, such as clay, silica, alumina and activated carbon, which adsorbs the contaminants and permits the solvent and oil fraction to be removed as a separate stream from which the solvent is recovered for recycling; the adsorbent with contaminants and the asphalt bottoms is mixed with aromatic and/or polar solvents to desorb the contaminants and washed as necessary, e.g., with benzene, toluene, xylenes and tetrahydrofuran, to clean adsorbent which is recovered and recycled; the solvent-asphalt mixture is sent to a fractionator for recovery and recycling of the aromatic or polar solvent. The bottoms from the fractionator include the concentrated PNA and contaminants and are further processes as appropriate.

Classifications:

International (IPC 8-9): B01D3/02 B01D3/14 C10C1/00 C10C3/00 C10C3/08 C10G11/18 C10G21/00 C10G21/28 C10G25/00 C10G25/03 C10G25/05 C10G25/06 C10G25/11 C10G25/12 C10G29/00 C10G29/02 C10G29/16 C10G29/22 C10G31/09 C10G31/11 C10G47/00 C10G53/08 C10G55/00 C10G55/06 C10G67/00 C10G67/04 C10G67/06 C10G7/00

C10G7/06 (Advanced/Invention);
B01D3/00 C10C1/00 C10C3/00 C10G11/00 C10G21/00 C10G25/00
C10G29/00 C10G47/00 C10G55/00 C10G67/00
C10G7/00 (Core/Invention)
International (IPC 1-7): C10G55/00
CPC: C10G31/09 C10G31/11 C10G53/08 C10G2300/1033
C10G2300/1044 C10G2300/1055 C10G2300/1059 C10G2300/107
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C10G7/00 C10G7/06 C10G2300/205 C10G57/00 B01D3/143
C10G25/003 C10G25/05 C10G25/12 C10C3/00 C10G21/003
C10G25/06 C10G25/00 C10G55/06 C10G67/06
European: C10C3/00 C10G21/00A C10G25/00 C10G25/00B
C10G25/05 C10G25/06 C10G25/12 C10G31/09 C10G31/11
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M10G300/20A2 M10G300/44 M10G400/04
US: 1/1 196/46 196/46P 202/153 208/108 208/113 208/22 208/22P
208/238 208/240 208/240S 208/245 208/245S 208/248 208/248S
208/250 208/251R 208/253 208/254.00R 208/254R 208/298 208/299
208/302 208/305 208/307 208/309 208/310.00R 208/310R 208/310Z
208/313 208/314 208/321 208/347 208/39 208/39P 208/39S 208/45
208/58 208/67 208/85 208/91 208/91P 208/96 208/99 422/261
502/400 502/402 502/407 585/820



Family:

Publication number	Publication date	Application number	Application date
BRPI0715996 A2	20130806	BR2007PI15996	20071019
BRPI0715996 B1	20170314	BR2007PI15996	20071019
BRPI0716295 A2	20131231	BR2007PI16295	20071106
BRPI0716295 B1	20171024	BR2007PI16295	20071106
BRPI0716295 B8	20180214	BR2007PI16295	20071106
CA2667240 AA	20090420	CA20072667240	20071019
CA2667240 C	20151208	CA20072667240	20071019
CA2668842 AA	20090506	CA20072668842	20071106
CA2668842 C	20151027	CA20072668842	20071106
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EP2084244 A2	20090805	EP20070839726	20071019
EP2084244 A4	20130424	EP20070839726	20071019
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ES2617053 T3	20170615	ES20070839994T	20071106
GC4059 A	20160314	GC2010P015858	20100512
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NO20091496 A	20090714	NO20090001496	20090416
NO20091497 A	20090731	NO20090001497	20090416
NO342170 B1	20180409	NO20090001496	20090416
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US2009120842 AA	20090514	US20070985533	20071114
US2009301931 AA	20091210	US20090497249	20090702
US2009321309 AA	20091231	US20090454298	20090515
US2010147647 AA	20100617	US20100658660	20100209
US2010252483 AA	20101007	US20100789910	20100528
US2012152808 AA	20120621	US20110331636	20111220
US2013126395 AA	20130523	US20120561794	20120730
US2014305840 AA	20141016	US20140265591	20140430
US7566394 BB	20090728	US20060584771	20061020
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US7867381 BB	20110111	US20100789910	20100528
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US8821717 BB	20140902	US20110331636	20111220

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US8986622 BB	20150324	US20100658660	20100209
US9315733 BB	20160419	US20090497249	20090702
WO08051498 A2	20080502	WO2007US22381	20071019
WO08051498 A3	20080619	WO2007US22381	20071019
WO08057587 A2	20080515	WO2007US23562	20071106
WO08057587 A3	20080703	WO2007US23562	20071106
WO09064377 A1	20090522	WO2008US12629	20081107
WO10132321 A2	20101118	WO2010US34167	20100510
WO10132321 A3	20101229	WO2010US34167	20100510
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Priority:

US20060584771	20061020	US20060593968	20061106	WO2007US22381	20071019
EP20070839994	20071106	WO2007US23562	20071106	US20070985533	20071114
WO2008US12629	20081107	US20090454298	20090515	US20090497249	20090702
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Probable Assignee: SAUDI ARABIAN OIL CO

Assignee(s): (std): AHMAD DHIYA AL SYED ; AL HAJI ADNAN ; AL HAJJI ADNAN ; AL HAMADH ALI ; AL KHALDI SALMAN ; AL NUFAILY JAFFAR H ; SAUDI ARABIAN OIL CO ; KOSEGLU OMER REFA ; MULLER HENDRIK ; SAUDI ARABIAN IOL CO

Assignee(s): SAUDI ARABIAN OIL CO ARAMCO ; SAUDI ARABIAN OIL COMPANY

Inventor(s): (std): KOSEGLU OMER REFA ; AL HAJI ADNAN ; SYED AHMAD DHIYA AL ; REFA KOSEGLU OMER ; HENDRIK MULLER ; ADNAN AL HAJJI ; AL NUFAILY JAFFAR H ; AL KHALDI SALMAN ; AL HAMADH ALI ; AL HAJJI ADNAN ; AHMAD DHIYA AL SYED ; OMER REFA KOSEGLU ; MULLER HENDRIK

Inventor(s): ALI HAMADH ; JAFFAR H AL NUFAILY ; DHIYA AL SYED AHMAD ; SALMAN KHALDI

Agent(s): RIDOUT AND MAYBEE LLP ; JACKSON RICHARD ERIC ; HOWICK NICHOLAS KEITH ; ISERN JORGE ; SULEIMAN I AL AMMAR LAW OFFICE ; MIZUNO KATSUFUMI ; KISHIDA MASAYUKI ; ABELMAN FRAYNE AND SCHWAB ; SPATH THOMAS E ; CRISPINO RALPH J

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

10) Family number: 43028981 (CN101376068A)

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Title: ATMOSPHERIC VACUUM DISTILLATION METHOD AND APPARATUS WITH VACUUM FLASH VAPORIZER

Abstract: The invention relates to an atmospheric and vacuum distillation device with a vacuum flash tower and a method thereof. The atmospheric and vacuum distillation device with a vacuum flash tower is characterized in that the vacuum flash tower arranged in front of a vacuum furnace is connected with the vacuum furnace and a vacuum tower through a pump and a pipeline. Constant bottom oil (1) is introduced into the vacuum flash tower (2) at first, and the operation pressure at the top part of the vacuum flash tower is higher than the operation pressure at the top part of the vacuum tower (9) by 10 to 200mmHg; Flash cap gas (3) is introduced into the upper part or the lower part of an outlet for a side product which is similar to Flash cap gas fraction; flash bottom oil (5) is introduced into the vacuum furnace (7) through a flash bottom oil pump (6); when the flash bottom oil is heated to 350 to 430 degrees, air-liquid mixing vacuum tower feed material is obtained through partial vaporization and is introduced into a flash evaporation segment (10) of the vacuum tower through a transfer line (8); and products with different fractions are drawn from the side of the vacuum tower and vacuum residue is drawn from the bottom of the vacuum tower. Through adding the vacuum flash tower to improve the working process of the atmospheric and vacuum distillation device, the invention achieves the advantages of increasing treatment capacity, increasing vacuum distillation yield, and reducing energy consumption.

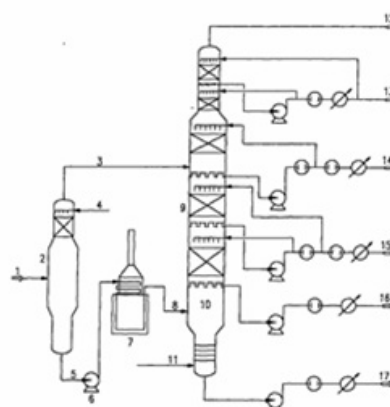
Classifications:

International (IPC 8-9): B01D3/10 C10G7/06 (Advanced/Invention);

B01D3/10 C10G7/00 (Core/Invention)

CPC: C10G7/06

PatBase - CN101376068_A



Family:

Publication number	Publication date	Application number	Application date
■ CN101376068 A	20090304	CN200810151345	20080917

Priority:

CN200810151345 20080917

Probable Assignee: UNIV TIANJIN

Assignee(s): (std): TIANJIN UNIV ; UNIV TIANJIN
Assignee(s): TIANJIN UNIVERSITY
Inventor(s): (std): YUBIN WANG ; YANXING WU ; ZHIJIE LIU ; SHUANG TIAN ; MINGFANG LUO ; LUHONG ZHANG ; DAOGUANG ZHANG ; CHUNHONG CHI ; BIN JIANG
Inventor(s): CHI CHUNHONG ; LIU ZHIJIE ; JIANG BIN ; LUO MINGFANG ; ZHANG LUHONG ; ZHANG DAOGUANG ; WU YANXING ; WANG YUBIN ; TIAN SHUANG

11) Family number: 44403656 (US2010038288A)

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Title: REFINING COAL-DERIVED LIQUID FROM COAL GASIFICATION, COKING, AND OTHER COAL PROCESSING OPERATIONS

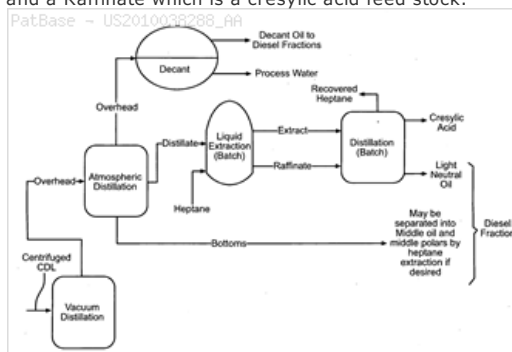
Abstract: A method of treating a coal-derived liquid byproduct from a coal gasification process includes subjecting the coal-derived liquid to a vacuum distillation process, thereby separating the coal-derived liquid into condensed gas and coal-derived liquid bottoms. The coal-derived liquid bottoms are mixed with a bottoms solvent capable of dissolving the coal-derived liquid bottoms. The solvent/bottoms mixture is introduced along with a linear chain hydrocarbon solvent into a liquid extractor. The Raffinate is separated from the solvent for the coal-derived liquid/bottoms mixture, thereby producing a heavy extract. The condensed gas is subjected to atmospheric distillation producing a bottoms fraction and another condensed fraction. The bottoms fraction may be used as fuel or for diesel fuel production. The condensed fraction is extracted with a linear hydrocarbon solvent in an extractor to produce light neutral oil and a Raffinate which is a cresylic acid feed stock.

Classifications:

International (IPC 8-9): B01D3/00 C10G1/02 C10G1/04 C10G7/06 (Advanced/Invention); C10G1/00 C10G7/00 (Core/Invention)
CPC: C10G2300/1074 C10G2300/44 C10G1/04 C10G7/06 C10G2400/04

European: C10G1/04 C10G7/06

US: 203/45 203/45P 203/46 203/46S 208/428 208/435



Family:

Publication number	Publication date	Application number	Application date
CN101649222 A	20100217	CN200810171006	20081031
CN101649222 B	20150121	CN200810171006	20081031
US2010038288 AA	20100218	US20080190271	20080812
US2011168541 AA	20110714	US20110069870	20110323
US8197678 BB	20120612	US20110069870	20110323

Priority:

US20080190271 20080812 US20110069870 20110323

Probable Assignee: NATIONAL INST OF CLEAN AND LOW CARBON ENERGY

Assignee(s): (std): FREDERICK JAMES P ; MR AND E LTD ; MR AND E LTD US ; NAT INST CLEAN AND LOW CARBON ENERGY ; WARWICK JAMES S

Assignee(s): NATIONAL INST OF CLEAN AND LOW CARBON ENERGY NICE ; NATIONAL INST OF CLEAN AND LOW CARBON ENERGY ; SHENHUA GROUP CORP LTD

Inventor(s): (std): FREDERICK JAMES P ; WARWICK JAMES S

Agent(s): MACMILLAN SOBANSKI AND TODD LLC

12) Family number: 47677760 (US2012056431A)

© PatBase

Title: EFFICIENT LOW RANK COAL GASIFICATION, COMBUSTION, AND PROCESSING SYSTEMS AND METHODS

Abstract: Efficient coal pre-processing systems (69) integrated with gasification, oxy-combustion, and power plant systems include a drying chamber (28), a volatile metal removal chamber (30), recirculated gases, including recycled carbon dioxide (21), nitrogen (6), and gaseous exhaust (60) for increasing the efficiencies and lowering emissions in various coal processing systems.

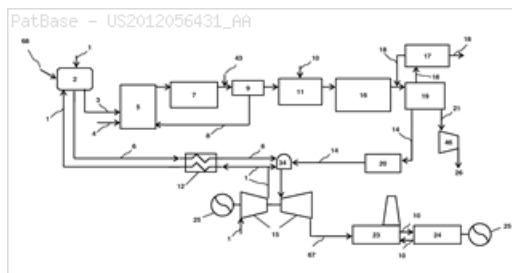
Classifications:

International (IPC 8-9): B01D53/50 B01D53/56 B01D53/62 B01D53/64 B23P17/00 C01B3/02 C10J3/00 C10J3/02 C10J3/84 C10L5/00 C10L5/36 C10L9/08 F01D15/10 F01K13/00 F01K27/00 F26B21/00 (Advanced/Invention)

CPC: C10L5/366 Y02E20/16 Y02E20/18 C10J3/84 C10J3/02 C10J2300/0909 C10J2300/0903 C10J2300/093 C10J2300/0969 C10J2300/1643 C10J2300/1656 C10J2300/1815 C10L9/08 Y10T29/49229

European: C10L5/36H C10L9/08

US: 1/1 252/372 29/888 29/888S 290/52 290/52P 48/210 48/210S



Family:

Publication number	Publication date	Application number	Application date
AU2010249327 AA	20101125	AU20100249327	20100524
AU2010249327 BB	20160331	AU20100249327	20100524
CA2800166 AA	20121121	CA20102800166	20100524
CA2800166 C	20180821	CA20102800166	20100524

EP2432857 A1	20120328	EP20100778529	20100524
EP2432857 A4	20150429	EP20100778529	20100524
US2012056431 AA	20120308	US20100321527	20100524
US2016102260 AA	20160414	US20150934459	20151106
US9181509 BB	20151110	US20100321527	20100524
US9598653 BB	20170321	US20150934459	20151106
WO10135744 A1	20101125	WO2010US35988	20100524

Priority:

US20090180750P 20090522 US20100321527 20100524 WO2010US35988 20100524
US20110321527 20111118 US20150934459 20151106

Probable Assignee: OF WYOMING RESEARCH D B A WESTERN RESEARCH INST CORP UNIV

Assignee(s): (std): BLAND ALAN E ; NEWCOMER JESSE D ; SELLAKUMAR KUMAR MUTHUSAMI ; UNIV WYOMING RES CORP ; UNIV WYOMING RES CORP D B A WESTERN RES INST ; UNIV WYOMING ; UNIV OF WYOMING RES CORP ; UNIV OF WYOMING RESEARCH CORP

Assignee(s): UNITED STATES DEPARTMENT OF ENERGY ; OF WYOMING RESEARCH CORP UNIV ; OF WYOMING RESEARCH D B A WESTERN RESEARCH INST CO ; OF WYOMING RESEARCH D B A WESTERN RESEARCH INST CORP UNIV

Inventor(s): (std): NEWCOMER JESSE D ; BLAND ALAN E ; SELLAKUMAR KUMAR MUTHUSAMI

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; SIM AND MCBURNEY; AIRD AND BERLIS IP PARTNERSHIP LTD; AIRD AND MCBURNEY LP; KADOR AND PARTNER; SANTANGELO LAW OFFICES PC; RESSUE NICOLE A

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT 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

13) Family number: 49086040 (US2012117928A)

© PatBase

Title: MULTI-STAGE STEAM-WATER SEPARATION DEVICE AND STEAM-WATER SEPARATOR

Abstract: In a multi-stage steam-water separation device and a steam-water separator, a first swirl vane (6) which causes a gas-liquid two-phase flow to rise while swirling is provided in a first riser (5) of a first steam-water separator (2), and a second swirl vane (12) which causes the gas-liquid two-phase flow which has passed through the first swirl vane (6) to rise while swirling at a speed higher than that provided by the first swirl vane (6), is provided in a second riser (11).

Classifications:

International (IPC 8-9): B01D17/038 B01D45/00 B01D45/12

B01D45/14 B01D45/16 B01D46/54 B01D50/00 F22B37/26

F22B37/32 G21C15/16 (Advanced/Invention)

CPC: F22B37/26 B01D45/14 B01D46/543 B01D50/002 G21C15/16

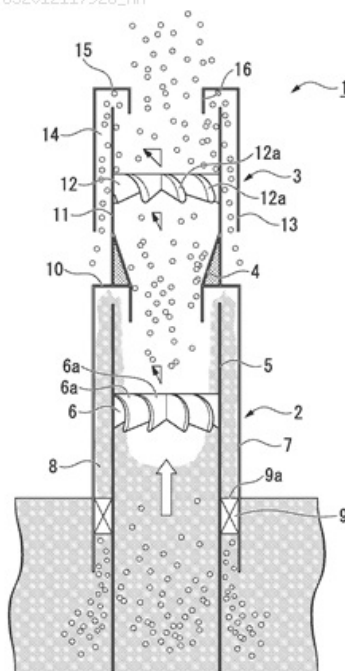
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S21C15/16 Y02E30/40

US: 55/392 55/394 55/396 55/398 55/399 55/442 55/442P 55/447

55/456 55/457 55/DIG.23

PatBase - US2012117928_AA



Family:

Publication number	Publication date	Application number	Application date
EP2510994 A1	20121017	EP20100835740	20100729
EP2510994 A4	20150624	EP20100835740	20100729
JP2011120999 A2	20110623	JP20090280550	20091210
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KR101434063 B1	20140825	KR20127003767	20100729
KR20120051689 A	20120522	KR20127003767	20100729
US2012117928 AA	20120517	US20100386515	20100729
US8741014 BB	20140603	US20100386515	20100729
WO11070818 A1	20110616	WO2010JP62770	20100729

Priority:

JP20090280550 20091210 WO2010JP62770 20100729

Probable Assignee: MITSUBISHI HEAVY IND LTD

Assignee(s): (std): KASAHARA JIRO ; KONDO YOSHIYUKI ; MITSUBISHI HEAVY IND LTD ; NISHIDA KENJI ; SHIMAMURA KENGO

Assignee(s): MITSUBISHI HEAVY INDUSTRIES LTD

Inventor(s): (std): KASAHARA JIRO ; KONDO YOSHIYUKI ; NISHIDA KENJI ; SHIMAMURA KENGO

Agent(s): HOFFMANN EITLE; WESTERMAN HATTORI DANIELS AND ADRIAN LLP; MORI RYUICHIROU 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 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

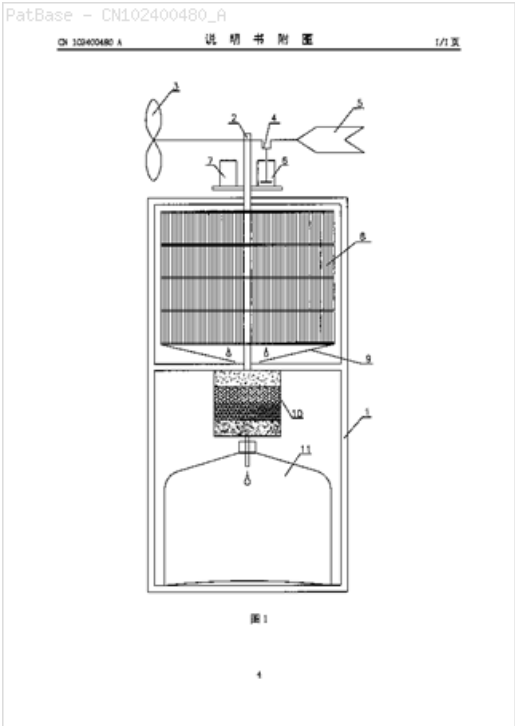
14) Family number: 50921487 (CN102400480A) © PatBase

Title: WIND-DRIVEN FRESH WATER CONDENSER

Abstract: The name of the invention is wind-driven fresh water condenser, and the invention relates to a fresh water condenser. The invention discloses the wind-driven fresh water condenser. In the wind-driven fresh water condenser, wind power is utilized to provide power; a pressurizer is driven to compress a refrigerant; a water condensing grating is cooled, so that moisture of the water condensing grating is condensed into water beads and then gathered into a water filter layer; water passing through the water filter layer flows into a water storage bottle; and thus, the aim of capturing fresh water from air is fulfilled.

Classifications:

International (IPC 8-9): E03B3/28 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
■ CN102400480 A	20120404	CN201110041702	20110222

Priority:
CN201110041702 20110222

Probable Assignee: YANQIU WANG

Assignee(s): (std): YANQIU WANG

Assignee(s): WANG YANQIU

Inventor(s): (std): YANQIU WANG

Inventor(s): WANG YANQIU

15) Family number: 51755899 (US2012220509A) © PatBase

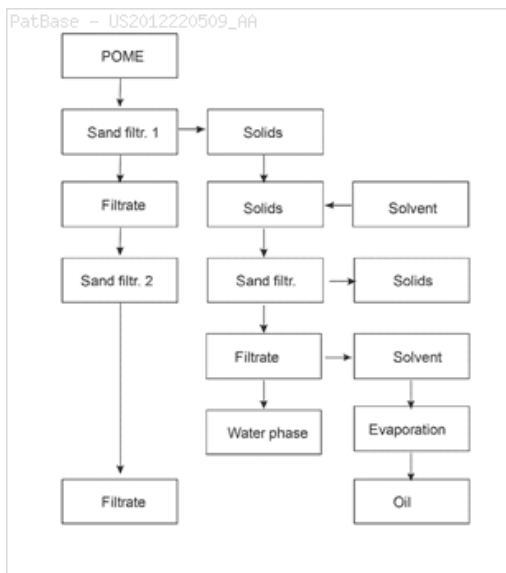
Title: OIL RECOVERY METHOD

Abstract: The invention relates to a method for the recovery of oil from an aqueous solution containing oil and solids, as well as to the use of products obtained by this method. The method of the invention comprises at least the following steps of: Adjusting the oil- and solids-containing aqueous solution to a pH which is acidic, separating an oil- and solids-containing fraction from the acidic aqueous solution with an separation agent which is hydrophilic or assumes a hydrophilic character in response to water, recovering the oil- and solids-containing fraction separated by means of said separation agent, extracting oil away from the solids with a water-insoluble extraction agent, and recovering the oil-containing water-insoluble extraction agent.

Classifications:

International (IPC 8-9): A23D7/00 B01D11/04 C02F1/26 C02F1/40 C02F1/66 C10G1/04 C10G17/00 C10G31/09 C10G53/04 C10G53/10 C10L1/00 C10L1/02 C10L1/08 C10L1/188 C10M101/04 C11B1/10 C11B13/00 C11B3/04 C11B3/16 (Advanced/Invention)

CPC: B01D11/0492 C02F1/26 C02F1/66 C10G53/04 C10G1/04 C10G17/00 C10G31/09 C10G53/10 C10G2400/04 C10G2400/10 C10L1/026 C10L1/08 C11B1/10
European: C10G1/04 C10G17/00 C10G31/09 C10G53/04 C10G53/10 C10L1/02D C10L1/08
US: 1/1 44/307 44/307S 508/459 508/459P 554/212 554/212S



Family:

Publication number	Publication date	Application number	Application date
■ CN103429725 A	20131204	CN201280009421	20120216
■ CN103429725 B	20160120	CN201280009421	20120216
■ DE602011003356 D1	20131212	DE201160003356T	20110217
■ DK2489276 T3	20140120	DK20110154768T	20110217
■ EP2489276 A1	20120822	EP20110154768	20110217
■ EP2489276 B1	20131016	EP20110154768	20110217
■ ES2442631 T3	20140212	ES20110154768T	20110217
■ US2012220509 AA	20120830	US20120399186	20120217
■ US9115317 BB	20150825	US20120399186	20120217
■ WO12110707 A1	20120823	WO2012FI50155	20120216

Priority:

EP20110154768 20110217 US20110443908P 20110217 WO2012FI50155 20120216
 US20120399186 20120217

Probable Assignee: NESTE OIL OYJ

Assignee(s): (std): FORTUM OYJ ; KOSKINEN PERTTU ; LAAKSO SIMO ; LEHTOMAEKI ILKKA ; LEHTOMAKI ILKKA ; NESTE OIL OYJ ; PASTINEN OSSI ; MUJUNEN MIIA

Inventor(s): (std): MUJUNEN MIIA ; PASTINEN OSSI ; LAAKSO SIMO ; LEHTOMAEKI IILKA ; LEHTOMAEKI ILKKA ; KOSKINEN PERTTU ; LEHTOMAKI ILKKA

Agent(s): KNUTH LEHTOLA SISCO HILLEVI; BERGGREN OY AB; ARIAS JUAN; ANDRUS INTELLECTUAL PROPERTY LAW LLP

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

16) Family number: 53077266 (US2015118101A)

© PatBase

Title: PROCESSING UNIT AND METHOD FOR SEPARATING HYDROCARBONS FROM FEEDSTOCK MATERIAL

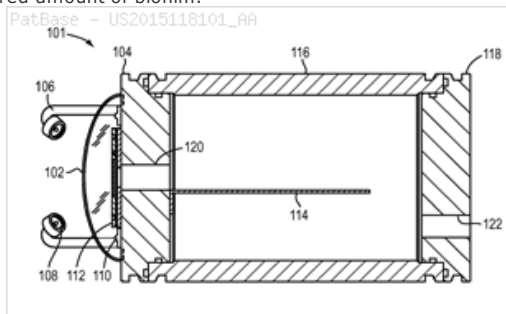
Abstract: The present invention relates to systems and methods for reducing fouling of a surface of an optically transparent element (102) with a light source. According to one aspect, the invention is a system including an LED (108) for emitting UV-C radiation, a mount for directing emitted UV-C radiation toward the optically transparent element (102), and control circuitry for driving the LED (108). The system may be used to remove a desired amount of biofilm.

Classifications:

International (IPC 8-9): A61L2/10 B01D3/08 B01D3/10 B03B B03B9/02 C10G C10G1/04 C10G31/06 C10G31/10 F21V21/00 F26B11/04 F26B17/20 (Advanced/Invention); B03B C10G (Subclass/Invention)

CPC: F21V21/00 B03B9/02 C10G31/08 C10G31/10 A61L2/10 C10G1/045 C10G31/06

US: 250/492.1 422/6



Family:

Publication number	Publication date	Application number	Application date
■ CA2775338 AA	20130205	CA20122775338	20120425
■ CA2775338 C	20140408	CA20122775338	20120425
■ CN104428399 A	20150318	CN201380033204	20130425
■ CN104428399 B	20160504	CN201380033204	20130425

CN105861032 A	20160817	CN201610214901	20130425
CN105861032 B	20180323	CN201610214901	20130425
EP2841533 A1	20150304	EP20130781813	20130425
EP2841533 A4	20160427	EP20130781813	20130425
EP2841533 B1	20181121	EP20130781813	20130425
HK1205179 A1	20151211	HK20150105980	20150624
IN08545CN2014 A	20160701	IN2014CN08545	20141125
MX2014013042 A1	20150408	MX20140013042	20130425
US2015118101 AA	20150430	US20130396892	20130425
US2016030611 A9	20160204	US20130396892	20130425
US2017333581 AA	20171123	US20170480595	20170406
WO13159231 A1	20131031	WO2013CA50318	20130425

Priority:

CA2012275338 20120425 CN201380033204 20130425 WO2013CA50318 20130425
US20130396892 20130425 US20140396892 20141024 US20170480595 20170406

Probable Assignee: FULCRUM ENVIRONMENTAL SOLUTIONS INC

Assignee(s): (std): FULCRUM ENV SOLUTIONS INC ; FULCRUM ENVIRONMENTAL SOLUTIONS INC

Assignee(s): CAULEY PHILLIP ; FULCRUM ENERGY CORP

Inventor(s): (std): CAULEY PHILLIP

Inventor(s): PHILLIP CAULEY

Agent(s): GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; ONEILL MICHELLE; HARRISON IP LTD; CHINA PATENT AGENT HK LTD; SALISBURY CLARE ET AL

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

17) Family number: 53176225 (US2013055699A)

© PatBase

Title: SYSTEM FOR RECYCLING CAPTURED AGGLOMERATED DIESEL SOOT AND RELATED METHOD

Abstract: A method of recycling captured agglomerated soot captured by and collected from a diesel emission control after-treatment (DECAT) system, the method comprising collecting captured agglomerated diesel soot (CADS) as a feedstock, loading the CADS into a controlled thermochemical conversion (TCC) process reactor, employing time-phased heat and pressure in the controlled TCC process reactor until the CADS sufficiently decompose to reclaim solids, liquid fuels and gases, piping pyrolysis oils (tars) and vapors produced in the controlled TCC process reactor to chambers, cooling and condensing the pyrolysis oils and vapors into a liquid form, and recirculating a pyrolysis gas produced in the controlled TCC process reactor for use as a source of heat and power.

Classifications:

International (IPC 8-9): B01D37/00 C10B49/02 C10B53/00 C10J3/60 F01N3/02 F01N3/021 F01N3/023

F01N9/00 (Advanced/Invention)

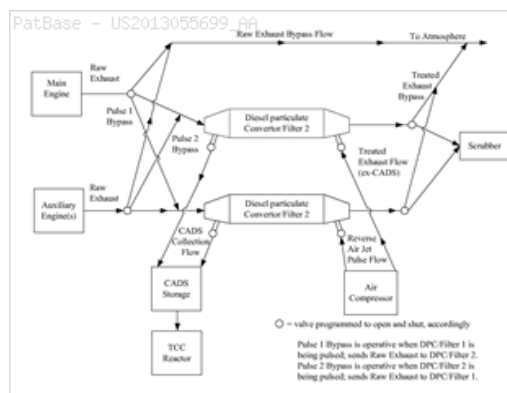
CPC: F01N3/021 C10B49/02 C10B53/00 C10J3/60 F01N13/04

Y02T10/20 C10J3/00 C10J3/84 C10J3/86 C10J2300/094

C10J2300/0956 C10J2300/0959 C10J2300/0973 C10J2300/0976

C10J2300/1884 C10J2300/1892

US: 423/215.5 588/300 588/321 588/404 60/274



Family:

Publication number	Publication date	Application number	Application date
CA2847701 AA	20140304	CA20122847701	20120906
CN103930657 A	20140716	CN201280054357	20120906
CN103930657 B	20170609	CN201280054357	20120906
IN02540DN2014 A	20150130	IN2014DN02540	20140401
SG11201400336S A1	20140328	SG20141100336	20120906
US2013055699 AA	20130307	US20120604103	20120905
US8722002 BB	20140513	US20120604103	20120905
WO13036549 A2	20130314	WO2012US53820	20120906
WO13036549 A3	20130502	WO2012US53820	20120906

Priority:

US20110531126P 20110906 US20120604103 20120905 WO2012US53820 20120906

Probable Assignee: DEARBORN FINANCIAL INC

Assignee(s): (std): DEARBORN FINANCIAL INC ; ROHLFS MICHAEL B

Assignee(s): DEARBORN FINANCIAL INC5N762 BURR ROADST. CHARLESIL60175US

Inventor(s): (std): ROHLFS MICHAEL B

Inventor(s): ROHLFS MICHAEL BUS

Agent(s): GOWLING LAFLEUR HENDERSON LLP; HARNESS DICKEY AND PIERCE PLC; OLSON STEPHEN T ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC 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

18) Family number: 55303483 (US2013319941A)

© PatBase

Title: SIMULTANEOUS RECOVERY OF COAGULANT AND ACID

Abstract: Processes and systems are provided for simultaneously recovering coagulant and acid in a water treatment system. Sludge produced by the water treatment system is contacted with acid to form acidified solids. The acidified solids flow into a combined membrane treatment tank having both cation and anion exchange membranes. Metal cations from the acidified solids cell diffuse across the cation exchange membranes to form recovered coagulant, while anions from the acidified solids diffuse across the anion exchange membranes to form recovered acid. The diffusion rate of the metal cations across the cation exchange membranes may be equal to or greater than the diffusion rate of the anions across the anion exchange membranes.

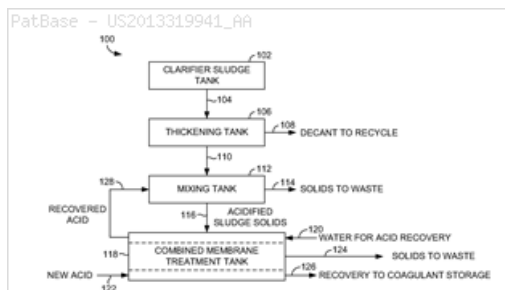
Classifications:

International (IPC 8-9): B01D11/04 B01D61/24 C02F1/26 C02F1/42 C02F1/44 C02F1/469 C02F1/58 C02F1/68 C02F11/00 (Advanced/Invention);

C02F1/52 C02F1/66 C02F11/12 (Advanced/Non-invention)

CPC: C02F1/4691 C02F1/44 C02F2303/18 B01D61/243 C02F1/5245 C02F1/66 C02F11/006 C02F11/12 C02F2303/16

US: 210/206 210/638

**Family:**

Publication number	Publication date	Application number	Application date
US2013319941 AA	20131205	US20120489254	20120605
US2015353388 AA	20151210	US20150707570	20150508
US9751778 BB	20170905	US20150707570	20150508

Priority:

US20120489254 20120605 US20150707570 20150508

Probable Assignee: AMERICAN WATER WORKS CO INC

Assignee(s): (std): AMERICAN WATER WORKS CO INC ; SCHNEIDER ORREN D

Inventor(s): (std): SCHNEIDER ORREN D

Agent(s): SHOOK HARDY AND BACON LLP

19) Family number: 56033450 (US2014083120A)

© PatBase

Title: RENEWABLE ENERGY-BASED ATMOSPHERIC WATER GENERATOR

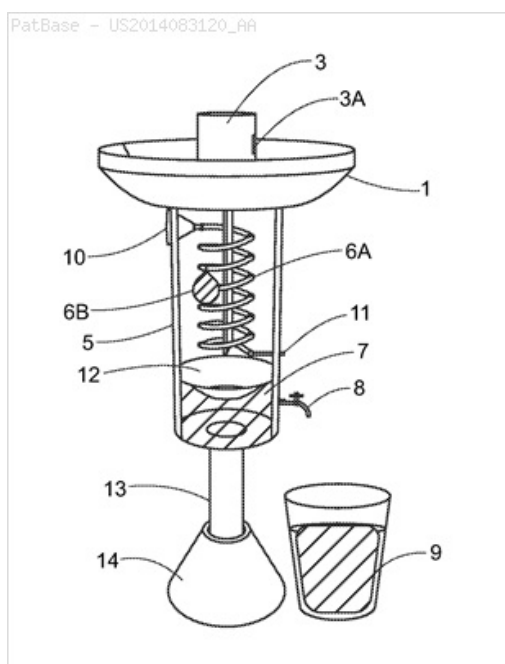
Abstract: The present invention describes an atmospheric potable water generator apparatus and method of use powered entirely by renewable energy sources, which generates water from atmospheric air. The apparatus uses solar energy to heat atmospheric air in a condensing air chamber, uses wind to cool the air, condenses water on a cooling surface thereby creating potable water from atmospheric air. The apparatus may be used off the energy grid and can be applied on a large scale or for personal portable use.

Classifications:

International (IPC 8-9): B01D5/00 (Advanced/Invention)

CPC: B01D5/0006 Y02P70/34 Y02A20/109 E03B3/28

US: 62/235.1 62/93

**Family:**

Publication number	Publication date	Application number	Application date
US2014083120 AA	20140327	US20130032652	20130920

Priority:

US20120703803P 20120921

US20130032652 20130920

Probable Assignee:

KATZ GUY

Assignee(s): (std):

KATZ GUY ; NOWAK ELIZABETH

Inventor(s): (std):

KATZ GUY ; NOWAK ELIZABETH

20) Family number: 57414072 (US2016030856A)

© PatBase

Title: DISTILLATION REACTOR MODULE

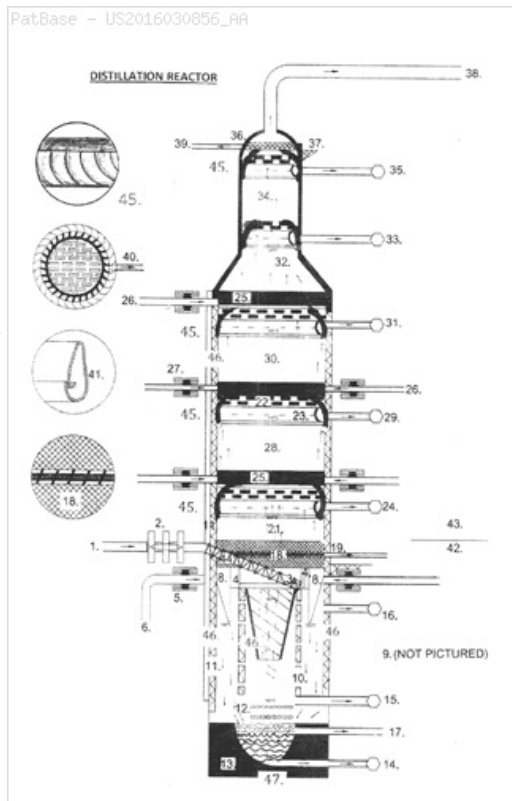
Abstract: The distillation reactor consists of a reactor apparatus with corresponding method of upstream distilling and purification of carbon based liquid or liquidized streams for use as fuels, lubricating oils and or gaseous energy and electricity production. The distillation reactor consolidates the atmospheric and vacuum distillation processes along with desalting, defueling, deasphalting, fractionation, thin/wiped film evaporation and Hydro finishing into an advanced high velocity, high volume single reactor system. Carbon based feed streams include either a single stream or preferably, a combined stream of liquefied coal slurries, crude oils, spent oils, Pyrolytic oils and or peat or other plant carbon derived liquids, vapors, mists or gases. The method further consists of controlling the mix ratio, flow velocity, sequential fractionation and filtration technology and processing atmospheres of the carbon feeds with the reactor apparatus. The combined apparatus and method allows for a refinery to consistently produce a finished barrel of oil well below traditional costs and at a higher efficiency than current art and prior art.

Classifications:

International (IPC 8-9): B01D3/00 B01D3/06 B01D3/10 B01D3/26 B01D3/32 B01D39/20 B01D53/48 B01D53/62 B01D59/04 B01J B01J19/24 B01J19/26 B01J2/00 B01J6/00 B01J8/24 B02C23/00 B03C1/00 B22F3/10 B22F9/00 B29B17/00 C01B17/027 C01B17/74 C02F1/00 C10B49/12 C10G1/00 C10G11/18 C10G33/00 C10G45/00 C10G57/00 C10G7/00 C10G7/06 C10G9/04 C10J3/72 C10L9/10 C22B13/00 C22B15/00 C22B21/00 C22B7/00 C22B9/00 F03G7/00 F27B17/00 G21C1/02 G21D5/00 H01M10/54 H01M8/00 H02K55/02 H02K7/09 (Advanced/Invention)

CPC: Y02E30/40 G21D1/00 B01J19/0093 B01J2219/00864 B01J2219/00867 B01J2219/00871 C01G21/02 C01B3/32 C01B13/02 C01B17/02 C01B2203/0205 C01B2203/0283 C01B2203/043 C01B2203/0445 C01B2203/0475 C10G1/02 C10G1/10 C10G31/08 C10G75/04 Y02P20/129 B09B5/00 Y02P30/446 Y02E30/30 B01D3/10 B01D3/006 B01D3/06 B01D39/2027 F03G7/00 B01D3/009 C10G7/06 G21C1/00 G21D5/00 C10G7/00 C10G57/00 C10G7/003 C10L9/10 C10J3/72 C10G1/00 C01B17/027 C01B17/74 B01J6/008 B01J2/00 B01J19/24 B01D53/48 B01D53/62 C22B9/00 F27B17/00 C02F1/00 C22B7/00 B29B17/00 B22F3/10 B22F9/00 C22B21/00 C22B15/00 C22B13/00 H01M8/00 H01M10/54 H02K55/02 H02K7/09 B02C23/00 B03C1/00 C10L2290/544 C10J2300/093 C10J2300/0946 B22F2009/001 C01B17/48 C10G11/18 C10G33/00 C10G45/00 Y02E20/16 Y02E20/18 Y02W10/33 Y02W10/37 Y02W30/84 C01B32/05 C01B32/20 C01B32/50 Y02P10/143

US: 196/46 202/232 209/213 210/251 241/301 241/65 266/160 310/90.5 422/129 422/170 422/187 422/198 422/255 423/522 423/567.1 429/49 505/163 505/166 60/698

**Family:**

Publication number	Publication date	Application number	Application date
CA2907677 AA	20150921	CA20142907677	20140318
EP2969180 A2	20160120	EP20140762668	20140318
EP2969180 A4	20161005	EP20140762668	20140318
IL242590 A0	20160131	IL20140242590	20140318
JP2016512165 T2	20160425	JP20160502609T	20140318
US2016030856 AA	20160204	US20140776734	20140318
US2016032904 AA	20160204	US20140776736	20140318
US2016045841 AA	20160218	US20140776732	20140515
WO14146129 A2	20140918	WO2014US31118	20140318
WO14146129 A3	20150129	WO2014US31118	20140318
WO14153570 A2	20140925	WO2014US38290	20140515
WO14153570 A3	20150219	WO2014US38290	20140515
WO14153570 A9	20150806	WO2014US38290	20140515
WO14200605 A2	20141218	WO2014US31116	20140318
WO14200605 A3	20150326	WO2014US31116	20140318
WO14200605 A4	20150430	WO2014US31116	20140318
WO14200605 A9	20150205	WO2014US31116	20140318

Priority:

US20130800209P 20130315

US20130801170P 20130315

US20130801491P 20130315

US20140776734 20140318

US20140776736 20140318

WO2014US31118 20140318

WO2014US31116 20140318

US20140776732 20140515

WO2014US38290 20140515

Probable Assignee: TRANSTAR GROUP LLC

Assignee(s): (std): BRADLEY RANDALL ; KALPAN ALLEN ; KAPLAN ALLEN ; TRANSTAR GROUP LTD

Assignee(s): TRANSTAR GROUP LLC

Inventor(s): (std): BRADLEY RANDALL ; KALPAN ALLEN ; KAPLAN ALLEN

Agent(s): ADE AND CO INC; NELLIGAN OBRIEN PAYNE LLP; PERRONACE ANDREA; HERSHKOVITZ ABRAHAM ET AL; HERSHKOTIZ ABRAHAM 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

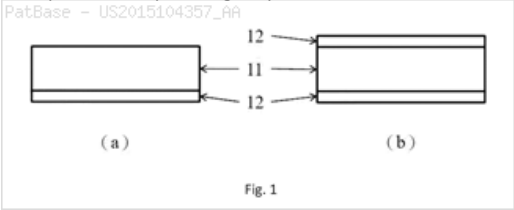
21) Family number: 59000523 (US2015104357A) © PatBase

Title: POROUS SILICA AEROGEL COMPOSITE MEMBRANE AND METHOD FOR MAKING THE SAME AND CARBON DIOXIDE SORPTION DEVICE

Abstract: The present invention provides a porous silica aerogel composite membrane and method for making the same and a carbon dioxide sorption device. The porous silicon oxide aerogel composite membrane includes a porous aluminum oxide membrane having a plurality of macro pores with an average diameter larger than 50 nm and a porous silica aerogel membrane formed on at least one side of the porous aluminum oxide membrane and the macro pores of surface layers of the porous aluminum oxide membrane where the porous silica aerogel membrane has a plurality of meso pores with an average diameter of 2~50 nm and is derived from methyltrimethoxysilane precursor by a sol-gel synthetic method.

Classifications:

International (IPC 8-9): B01D53/18 B01D53/22 B01D53/62
B01D67/00 B01D69/12 B01D71/00 B01D71/02 B01J20/08 B01J20/10
B01J20/28 B05D1/18 B05D3/00 B32B18/00 B32B5/32 C04B35/10
C04B35/14 C04B35/624 C04B38/06 (Advanced/Invention);
B01D71/02 (Advanced/Non-invention)
CPC: B01D2053/221 B01D53/228 B01D67/0048 B01D69/12
B01D2257/504 B01J20/08 B01J20/103 B01J20/28035 B01J20/28083
B01J20/28085 Y02C10/04 Y02C10/10 B01D69/125 B01J20/28004
B01D71/025 B01D71/027 Y02C10/08
US: 422/187 427/397.7 502/405 96/11



Family:

Publication number	Publication date	Application number	Application date
TW201514126 A	20150416	TW20140110336	20140319
TWI565681 B	20170111	TW20140110336	20140319
US2015104357 AA	20150416	US20140248813	20140409
US2017095769 AA	20170406	US20160383278	20161219
US9561463 BB	20170207	US20140248813	20140409
US9636633 BB	20170502	US20160383278	20161219

Priority:

TW20130137134 20131015 TW20140110336 20140319 US20140248813 20140409
US20160383278 20161219

Probable Assignee: CHUNG YUAN CHRISTIAN UNIV

Assignee(s): (std): CHUNG YUAN CHRISTIAN UNIV ; UNIV CHUNG YAN CHRISTIAN ; UNIV CHUNG YUAN CHRISTIAN

Inventor(s): (std): CHANG KAI SHIUN ; CHEN CHIEN HUA ; KO CHIA CHIEH ; LIN YI FENG ; TUNG KUO LUN

Agent(s): WPAT PC; JUSTIN

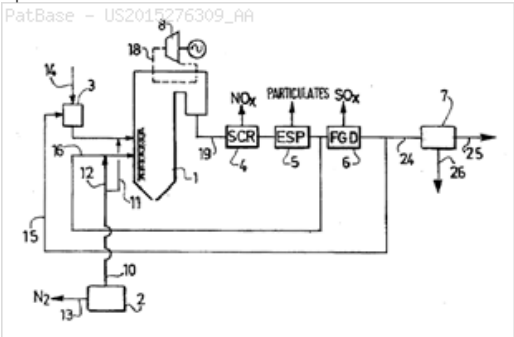
22) Family number: 60453236 (US2015276309A) © PatBase

Title: PROCESS AND APPARATUS FOR SEPARATING NO2 FROM A CO2 AND NO2- CONTAINING FLUID

Abstract: A process for separating carbon dioxide from a fluid containing carbon dioxide, NO2, and at least one of oxygen, argon, and nitrogen comprises the steps of separating at least part of the fluid into a carbon dioxide enriched stream, a carbon dioxide depleted stream comprising CO2 and at least one of oxygen, argon, and nitrogen and a NO2 enriched stream and recycling said NO2 enriched stream upstream of the separation step.

Classifications:

International (IPC 8-9): B01D19/00 B01D3/00 B01D3/14 B01D53/00
B01D53/22 B01D61/36 C01B31/20 C01B32/50 F25J3/02 F25J3/06
F25J3/08 (Advanced/Invention);
B01D71/48 B01D71/52 B01D71/56 B01D71/70
B01D71/80 (Advanced/Non-invention)
CPC: B01D53/002 F25J2210/70 F25J2220/84 B01D3/145
B01D53/228 B01D71/48 B01D71/52 B01D71/56 B01D71/70
B01D71/80 B01D2311/04 B01D2311/08 B01D2311/13
B01D2311/2669 B01D2323/30 F25J2200/04 F25J2200/40
F25J2200/70 F25J2205/02 F25J2205/30 F25J2205/40 F25J2205/80
F25J2210/04 F25J2220/82 F25J2230/30 F25J2235/80 F25J2245/02
F25J2270/02 F25J2270/04 Y02P20/145 Y02P20/152 B01D19/0031
B01D53/22 F25J3/0266 B01D61/362 F25J2200/02 F25J2215/80
Y02C10/12 Y02P70/34 B01D53/229 B01D3/00 B01D2256/22
B01D2257/404 B01D2259/4516 F25J2230/80 C01B32/50
US: 1/1 62/617



Family:

Publication number	Publication date	Application number	Application date
CN106132495 A	20161116	CN201580015837	20150327
DE602015014289 D1	20180830	DE201560014289T	20150327
EP3145606 A1	20170329	EP20150716304	20150327
EP3145606 B1	20180801	EP20150716304	20150327
US2015276309 AA	20151001	US20140265710	20140430
US2016313058 AA	20161027	US20160198677	20160630
US9458022 BB	20161004	US20140265710	20140430

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WO15148927 A1	20151001	WO2015US22999	20150327

Priority:

US20140971840P 20140328 US20140265710 20140430 EP20150716304 20150327
WO2015US22999 20150327 US20160198677 20160630

Probable Assignee: AIR LIQUIDE

Assignee(s): (std): BEASSE GREGOIRE ; BOURHY WEBER CLAIRE ; KOSURI MADHAVA R ; KULKARNI SUDHIR S ; L AIR LIQUIDE SOC ANONYME POUR L ETUDE ET L EXPLOITATION DES PROCEDES GEORGES CLAUDE ; LECLERC MATHIEU ; L AIR LIQUIDE SOC ANONYME POUR L ETUDE ET EXPL DES PROCEDES GEORGES CLAUDE ; L AIR LIQUIDE POUR L ETUDE ET L EXPLOITATION DES PROCEDES GEORGES CLAUDE SA ; LAIR LIQUIDE POUR LETUDE ET LEXPLOITATION DES PROCEDES GEORGES CLAUDE SA ; AIR LIQUIDE

Assignee(s): AMERICAN AIR LIQUIDE INC ; L AIR LIQUIDE SOC ANONYME POUR L ETUDE ET EXPLOITATION DES PROCEDES GEORGES CLAUDE

Inventor(s): (std): WEBER BOURHY CLAIRE ; LECLERC MATTHIEU ; LECLERC MATHIEU ; KULKARNI SUDHIR S ; KOSURI MADHAVA R ; BEASSE GREGOIRE ; BOURHY WEBER CLAIRE

Inventor(s): KOSURI MADHAVA R NEWARK ; KULKARNI SUDHIR S WILMINGTON

Agent(s): MERCEY FIONA SUSAN; CHRISTOPHER J; CRONIN CHRISTOPHER J 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

23) Family number: 61255326 (US2017247274A)

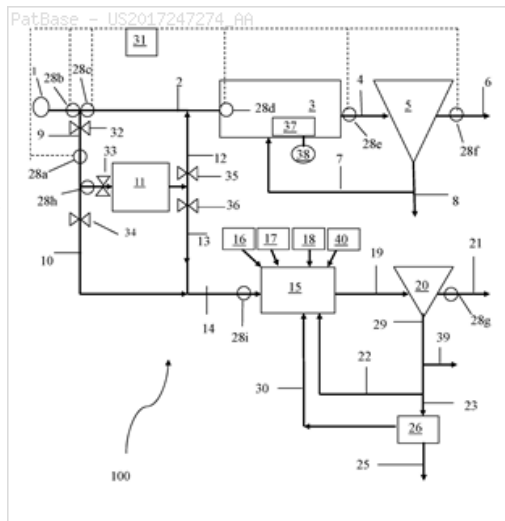
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Title: SIDE STREAM TREATMENT FOR OVERFLOW

Abstract: A system and method of treating wastewater. In one embodiment, the system comprises a biological reactor fluidly connected to a source of wastewater and having a treated wastewater outlet, a fixed film biological reactor connected to the source of wastewater and having a fixed film effluent outlet, and a ballasted system fluidly connected to the fixed film effluent outlet. The ballasted system may comprise a ballast reactor tank configured to provide a ballasted effluent, and a source of ballast material fluidly connected to an inlet of the ballast reactor tank. The system may further comprise a bypass line having an inlet fluidly connected to the source of wastewater, a first outlet fluidly connected to the ballasted system, and a second outlet fluidly connected to the fixed film biological reactor, the bypass line configured to bypass the fixed film biological reactor.

Classifications:

International (IPC 8-9): B01D35/06 C02F1/48 C02F1/52 C02F1/56 C02F3/00 C02F3/04 C02F3/06 C02F3/08 C02F3/12 C02F3/28 (Advanced/Invention); C02F3/04 C02F3/08 C02F3/28 (Advanced/Non-invention) **CPC:** C02F3/085 C02F3/2826 C02F3/2833 C02F2209/001 C02F2209/003 C02F2209/005 C02F2209/36 C02F2305/12 Y02W10/15 C02F1/56 C02F1/5236 C02F1/48 C02F2209/14 C02F2209/15 C02F3/006 C02F3/04 C02F3/06 C02F3/082 C02F3/12 C02F3/2806 C02F2209/08 C02F2209/10 C02F2209/40 C02F2301/043



Family:

Publication number	Publication date	Application number	Application date
AU2015279981 AA	20151230	AU20150279981	20150624
CA2945824 AA	20161013	CA20152945824	20150624
CN106457093 A	20170222	CN201580026063	20150624
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GB201620460 A0	20170118	GB20160020460	20150624
GB2542051 A1	20170308	GB20160020460	20150124
GB2542051 A1	20170308	GB20160020460	20150624
US2017247274 AA	20170831	US20150320052	20150624
WO15200478 A1	20151230	WO2015US37409	20150624

Priority:

US20140016688P 20140625 US20150320052 20150624 WO2015US37409 20150624

Probable Assignee: EVOQUA WATER TECH LLC

Assignee(s): (std): EVOQUA WATER TECH LLC ; EVOQUA WATER TECHNOLOGIES LLC

Assignee(s): PINO JELCIC SERGIO ANDRES

Inventor(s): (std): PINO JELCIC SERGIO ANDRES ; SERGIO ANDREAS PINO JELCIC

Agent(s): EVOQUA WATER TECHNOLOGIES MEMBRANE SYSTEMS PTY LTD; SHELSTON IP PTY LTD; GOWLING WLG CANADA LLP; WILKINS FREDERICK C

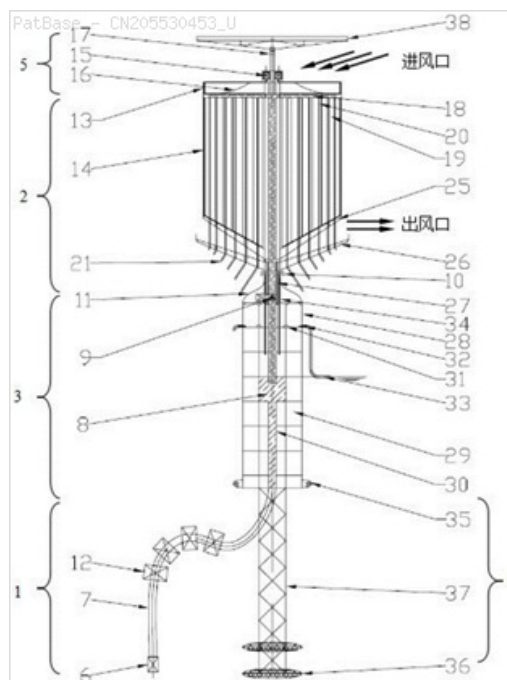
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24) Family number: 62166489 (CN205530453U)

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Title: WATER INSTALLATION AND SYSTEM ARE MADE TO ATURAL BEAT EXCHANGE AIR

Abstract: The utility model discloses a water installation is made to atural beat exchange air, and the device includes diversion mechanism (1) at least, congeals water mechanism (2) and power machine structure, diversion mechanism (1) be used for delivering to with fixed attention the sea water pipeline in the water mechanism (2) with low temperature seawater in, the water mechanism (2) of congealing constitute by induced air device (13) and water condenser (14), induced air device (13) be used for introducing water condenser (14) wind channel with damp and hot air in, water condenser (14) are situated between and make the damp and hot air of introducing produced the comdenstion water by seawater cooling as congealing the hydrophily, power machine constructs for whole device supply electric energy. An including this water system of making of making the water installation, includes still that breakwater, header, collection raceway, fresh water are handled and production work?platform, defeated pipeline, single point mooring unit outward. Temperature difference through nature different substance produces the comdenstion water, has practiced thrift the energy, realize the scale and make water in a large number, and whole device can set up in the sea saving soil.

Classifications:**International (IPC 8-9):** E03B3/28 (Advanced/Invention)**CPC:** E03B3/28**Family:**

Publication number	Publication date	Application number	Application date
■ CN105507367 A	20160420	CN201610048875	20160125
■ CN205530453 U	20160831	CN201620071936U	20160125

Priority:

CN201610048875 20160125 CN201620071936U 20160125

Probable Assignee: ZHANG FANGYUAN**Assignee(s):** (std): ZHANG FANGYUAN**Assignee(s):** ZHANG FANG YUAN**Inventor(s):** (std): ZHANG FANGYUAN**25) Family number: 63666636** (US2016284445A)

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Title: ENERGY EFFICIENT COPPER WIRE PRODUCTION SYSTEM

Abstract: Systems are provided for processing copper wires. In one embodiment, a system for processing copper with coating material is provided. The system employs a housing, an input interface for receiving copper wires, and an output interface for receiving copper wires. In one embodiment, both the input interface and the output outface are connected to the housing. Furthermore, an evaporation zone, a solid-state area, and a combustion chamber may be disposed in the housing. The evaporation zone is connected to the input interface, and the solid-state area is connected to the output interface. The combustion chamber processes gases produced in the evaporation zone. Three returning pipes are provided, each being connected to the exhaust gas tube for directing processed gases to other components of the system.

Classifications:**International (IPC 8-9):** B01D53/86 C23C30/00

H01B13/00 (Advanced/Invention)

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B01D53/86

US: 118/715

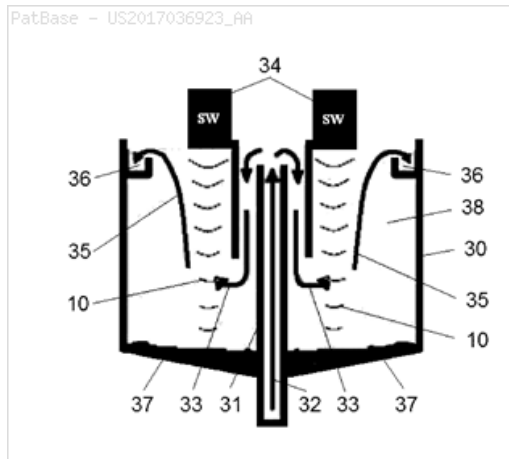
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Title: ACOUSTIC PRESSURE SHOCK WAVE DEVICES AND METHODS FOR FLUIDS PROCESSING

Abstract: A method of treating fluids, including for recovery of water apart from impurities or undesired matter, utilizes application of shock waves to the fluids.

Classifications:

International (IPC 8-9): B01D21/00 B01D21/28 B01D61/02
B01D65/02 B01D65/08 B01D9/00 B01J19/08 B03D3/04 C01B5/02
C02F1/00 C02F1/22 C02F1/24 C02F1/36 C02F1/44 C02F1/56
C02F103/08 C02F11/00 C02F3/12 C02F9/02
G21F9/06 (Advanced/Invention);
C02F1/52 C02F101/32 C02F103/08 C02F11/12 (Advanced/Non-
invention)
CPC: C02F1/36 B01D21/283 B01D21/0084 B01D65/08 B01D65/02
B01D61/025 C02F1/441 C02F2103/08 C02F1/22 B01D9/0004
B01D2321/30 C02F2303/16 C02F2303/20 B01D9/0036 B01D9/0081
B01D21/009 G21F9/06 C02F2001/5218 G21Y2002/60 G21Y2004/20
C02F1/44 B01D9/0009 B01D21/0006 C01B5/00 B01D21/0012
B01D2313/20 B01D2313/24 B01D2313/36 B01D2321/2066
B03D3/04 C02F1/52 C02F11/12 C02F101/32 C02F2201/008
C02F2303/04 C02F2303/22 Y02A20/131 Y02A20/132 Y02W10/30
Y02W10/37
US: 210/636 210/703 210/714



Family:

Publication number	Publication date	Application number	Application date
CA2992481 AA	20180112	CA20162992481	20160808
EP3331828 A1	20180613	EP20160835747	20160808
US2017036923 AA	20170209	US20160230765	20160808
US2017057843 AA	20170302	US20160350216	20161114
US2017057844 AA	20170302	US20160351514	20161115
US2017066663 AA	20170309	US20160353216	20161116
US10053376 BB	20180821	US20160230765	20160808
WO17027457 A1	20170216	WO2016045999	20160808

Priority:

US20150202455P	20150807	US20160230765	20160808	WO2016US45999	20160808
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Probable Assignee: SANUWAVE INC

Assignee(s): (std): SANUWAVE INC

Assignee(s): CIOANTA IULIAN ; JACKSON JOHN

Inventor(s): (std): CIOANTA IULIAN ; JACKSON JOHN

Agent(s): OSLER HOSKIN AND HARCOURT LLP; RAFFAY AND FLECK; HUNTON ANDREWS KURTH LLP; HANSON
ERIC J 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 SV SY SZ TD TH TJ TM TN TR TT UA UD UG US UZ VC VN ZA ZM ZW

Title: RECOVERY AND RE-USE OF WASTE ENERGY IN INDUSTRIAL FACILITIES

Abstract: Configurations and related processing schemes of direct or indirect (or both) inter-plants heating systems synthesized for grassroots medium grade crude oil semi-conversion refineries to increase energy efficiency from specific portions of low grade waste heat sources are described. Configurations and related processing schemes of direct or indirect (or both) inter-plants heating systems synthesized for integrated medium grade crude oil semi-conversion refineries and aromatics complex for increasing energy efficiency from specific portions of low grade waste sources are also described.

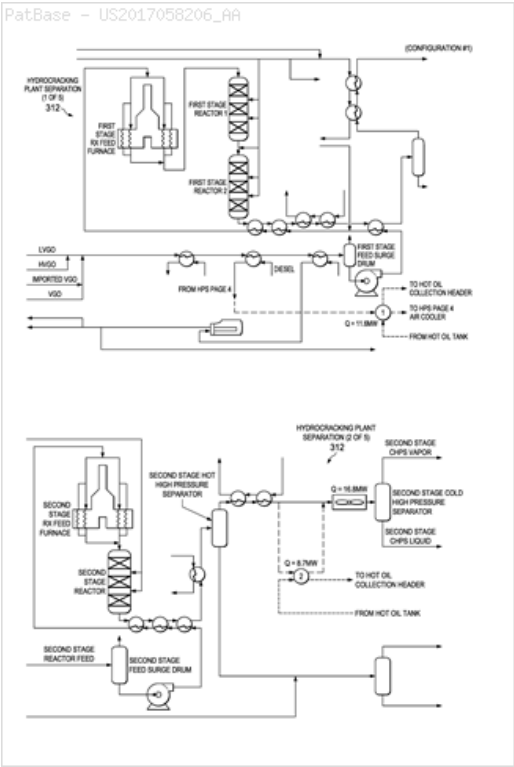
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 B01D53/86 B01D53/96 C01B3/24 C01G45/02 C02F1/58 C07C5/27
 C07C7/00 C07C7/08 C10G33/06 C10G35/04 C10G45/00 C10G45/02
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 F25B11/02 F25B27/02 F25B39/00 F25B43/00 F25B5/02 F25B9/00
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 H02K7/18 H02P9/04 (Advanced/Invention);
 C02F101/10 C02F101/16 C02F103/18 C02F103/36 F02B63/04

F03G7/08 (Advanced/Non-invention)

CPC: C10G35/04 C10L3/101 C07C7/08 C10L3/103 C10L3/104
C10G65/12 C10G33/06 C10G2300/4056 C10G2300/4006
C10L2290/06 C10G2300/207 C10L2290/541 F01K13/02 F01K3/185
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C07C7/00 C07C15/08 F01K21/005 F01K25/10 F28D7/0083
F01K23/064

US: 122/448.1 165/47 203/26 290/52 290/54 60/39.15 60/641.11
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700/288 95/288



Family:

Publication number	Publication date	Application number	Application date
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US2018094866 AA	20180405	US20170833859	20171206
US2018128130 AA	20180510	US20180862392	20180104
US2018202721 AA	20180719	US20180918332	20180312
US9745871 BB	20170829	US20150978085	20151222
US9803145 BB	20171031	US20160087499	20160331
US9803505 BB	20171031	US20160087403	20160331
US9803506 BB	20171031	US20160087412	20160331
US9803507 BB	20171031	US20160087440	20160331
US9803508 BB	20171031	US20160087606	20160331
US9803509 BB	20171031	US20160087441	20160331
US9803511 BB	20171031	US20160087518	20160331
US9803513 BB	20171031	US20160087512	20160331

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US9816401 BB	20171114	US20150978035	20151222
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US9828885 BB	20171128	US20150978277	20151222
US9845995 BB	20171219	US20160242041	20160819
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US9851153 BB	20171226	US20160241998	20160819
US9869209 BB	20180116	US20170664829	20170731
US9879918 BB	20180130	US20160242186	20160819
US9891004 BB	20180213	US20160242115	20160819
US9915477 BB	20180313	US20160242100	20160819
US10113448 BB	20181030	US20150978210	20151222
US10113805 BB	20181030	US20170833791	20171206
US10119764 BB	20181106	US20160241989	20160819
US10125639 BB	20181113	US20170643022	20170706
US10125640 BB	20181113	US20170819635	20171121
US10126067 BB	20181113	US20160241942	20160819
WO17034620 A1	20170302	WO2016US27413	20160414
WO17034622 A1	20170302	WO2016US27794	20160415
WO17034623 A1	20170302	WO2016US27797	20160415
WO17034628 A1	20170302	WO2016US30063	20160429
WO17034629 A1	20170302	WO2016US30156	20160429
WO17035075 A1	20170302	WO2016US48042	20160822
WO17035081 A1	20170302	WO2016US48063	20160822
WO17035083 A1	20170302	WO2016US48066	20160822
WO17035084 A1	20170302	WO2016US48067	20160822
WO17035087 A1	20170302	WO2016US48071	20160822
WO17035089 A1	20170302	WO2016US48074	20160822
WO17035091 A1	20170302	WO2016US48076	20160822
WO17035093 A1	20170302	WO2016US48078	20160822
WO17035146 A1	20170302	WO2016US48207	20160823
WO17035148 A1	20170302	WO2016US48209	20160823
WO17035149 A1	20170302	WO2016US48210	20160823
WO17035150 A1	20170302	WO2016US48212	20160823
WO17035153 A1	20170302	WO2016US48219	20160823
WO17035156 A1	20170302	WO2016US48223	20160823
WO17035157 A1	20170302	WO2016US48224	20160823
WO17035160 A1	20170302	WO2016US48229	20160823
WO17035165 A1	20170302	WO2016US48236	20160823
WO17035166 A1	20170302	WO2016US48237	20160823

Priority:

US20150209147P	20150824	US20150209188P	20150824	US20150209217P	20150824
US20150209223P	20150824	US20150978035	20151222	US20150978085	20151222
US20150978359	20151222	US20150978277	20151222	US20150978210	20151222
US20160087403	20160331	US20160087329	20160331	US20160087440	20160331
US20160087412	20160331	US20160087441	20160331	US20160087606	20160331
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WO2016US48076	20160822	WO2016US48042	20160822	WO2016US48078	20160822
WO2016US48074	20160822	WO2016US48212	20160823	WO2016US48207	20160823
WO2016US48219	20160823	WO2016US48236	20160823	WO2016US48210	20160823
WO2016US48223	20160823	WO2016US48224	20160823	WO2016US48209	20160823
WO2016US48229	20160823	WO2016US48237	20160823	US20170643022	20170706
US20170664829	20170731	US20170718687	20170928	US20170794196	20171026
US20170819635	20171121	US20170833088	20171206	US20170833730	20171206
US20170833639	20171206	US20170833754	20171206	US20170833791	20171206
US20170833859	20171206	US20180862392	20180104	US20180918332	20180312

Probable Assignee: SAUDI ARABIAN OIL CO

Assignee(s): (std): ARAMCO SERVICES CO ; SAUDI ARABIAN OIL CO ; SAUDI ARABIAN OIL CO LTD

Inventor(s): (std): AL SAED HANI MOHAMMED ; BUNAIYAN AHMAD SALEH ; KAMEL AKRAM HAMED MAHMOUD ; KAMEL AKRAM HAMED MOHAMED ; NOURELDIN MAHMOUD BAHY MAHMOUD ; MAHMOUD NOURELDIN MAHMOUD BAHY ; MAHMOUD BAHY MAHMOUD NOURELDIN ; HANI MOHAMMED AL SAED ; AKRAM HAMED MOHAMED KAMEL

Agent(s): CONROY JOHN; FISH AND RICHARDSON PC; BRUCE CARL E 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

29) Family number: 66451765 (US2017209829A)

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Title: INTEGRATED MEMBRANE-PYROLYSIS SYSTEMS AND METHODS

Abstract: A method of processing a mixture of heated vapors, at least two of which substantially differ in polarity from each other, the method comprising directing said mixture of heated vapors at a temperature of at least 150 degrees centigrade through a hydrophobic or hydrophilic mesoporous membrane comprising a mesoporous coating of hydrophobized or hydrophilized metal oxide nanoparticles, respectively, wherein the hydrophobic mesoporous membrane permits passage of

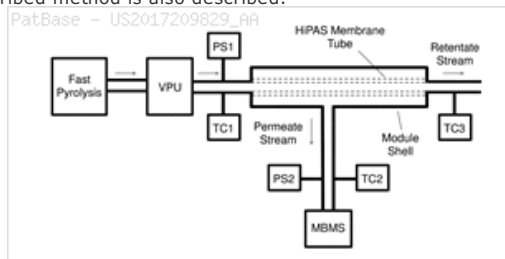
one or more hydrophobic heated vapors and blocks passage of one or more hydrophilic heated vapors, and wherein the hydrophilic mesoporous membrane permits passage of one or more hydrophilic heated vapors and blocks passage of one or more hydrophobic heated vapors. The method is particularly directed to embodiments where the heated vapors emanate from a pyrolysis process. An apparatus for achieving the above-described method is also described.

Classifications:

International (IPC 8-9): B01D53/22 B01D63/06 B01D69/04
B01D71/02 C10B53/02 C10G1/00 C10G1/02
C10K3/00 (Advanced/Invention)

CPC: B01D53/228 B01D71/024 C10G1/02 C10G1/002
B01D2053/221 B01D2325/36 B01D2325/38 C10B53/02 B01D63/063
B01D2255/102 B01D2255/2065 B01D2255/20707 B01D2255/20715
B01D2255/20753 B01D2255/20769 B01D2255/504 B01D2256/24
B01D2257/702 B01D2257/80 B01D2258/0283 C10K3/00 Y02E50/14

US: 159/DIG.27 210/180 210/321.6 210/490 210/500.23 210/640
416/27 423/210 423/215.5 423/437.1 427/243 429/49 502/4
523/310 568/917



Family:

Publication number	Publication date	Application number	Application date
US2017209829 AA	20170727	US20170415370	20170125
US10118124 BB	20181106	US20170415370	20170125

Priority:

US20160286651P 20160125 US20160364477P 20160720 US20170415370 20170125

Probable Assignee: UT BATTELLE LLC

Assignee(s): (std): ALLIANCE SUSTAINABLE ENERGY ; NAT RENEWABLE ENERGY LABORATORY ; UT BATTELLE LLC

Assignee(s): ALLIANCE FOR SUSTAINABLE ENERGY LLC ; NATIONAL RENEWABLE ENERGY LABORATORY ; ENERGY UNITED STATES DEPARTMENT OF ; US DEPARTMENT OF ENERGY

Inventor(s): (std): BISCHOFF BRIAN L ; DAVIS MARK F ; HU MICHAEL Z ; ENGTAKUL CHAIWAT

Agent(s): SCULLY SCOTT MURPHY AND PRESSER

30) Family number: 66907952 (US2018078878A)

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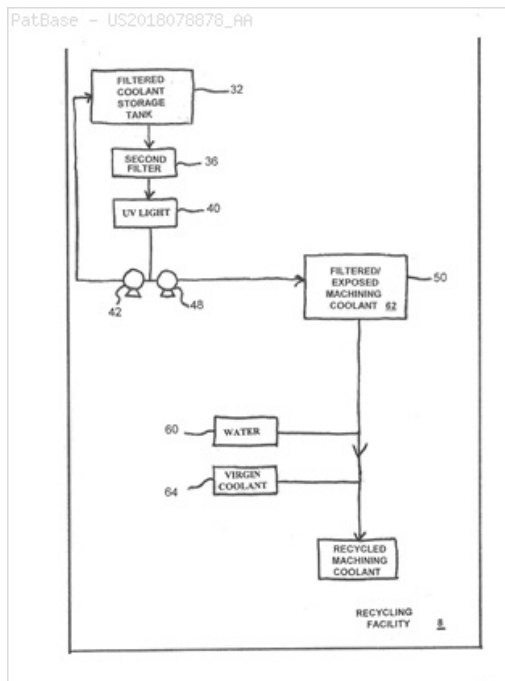
Title: SYSTEM AND PROCESS FOR RECYCLING MACHINING WASTE FROM CNC EQUIPMENT

Abstract: A system and process for recycling machining waste into a solid/scrap material component and a recyclable machining coolant. The system and process comprise collecting the waste machining waste and mechanically separating the machining waste into a solid/scrap material component and a machining waste liquid component. The machining waste liquid component is decanted to separate oils and solids from the recyclable machining coolant. The machine recyclable machining coolant is then filtered through at least a first filter and preferably a second, finer mesh filter. The recyclable machining coolant is then exposed to UV light to kill bacteria and microorganisms. Lastly, ultrapure water is added to dilute the recyclable machining coolant and form the recycled machining coolant. If desired, a virgin machining coolant can be added to the recycled machining coolant, to replenish any additive(s) stripped during the recycling process, prior to resale of the recycled machining coolant.

Classifications:

International (IPC 8-9): B01D17/00 B01D21/26
B01J19/12 (Advanced/Invention)

CPC: B01D21/262 B01J19/123 B01D21/10 B01D2221/14
B23Q11/1069 C10M175/04 C10M175/0058



Family:

Publication number	Publication date	Application number	Application date
US2018078878 AA	20180322	US20170701992	20170912
US9757667 BA	20170912	US20130096071	20131204

Priority:

US20130096071 20131204 US20170701992 20170912

Probable Assignee: BIGOS II DONALD EDWARD

Assignee(s): (std): BIGOS II DONALD EDWARD

Inventor(s): (std): BIGOS II DONALD EDWARD

31) Family number: 67652425 (US2017341015A)

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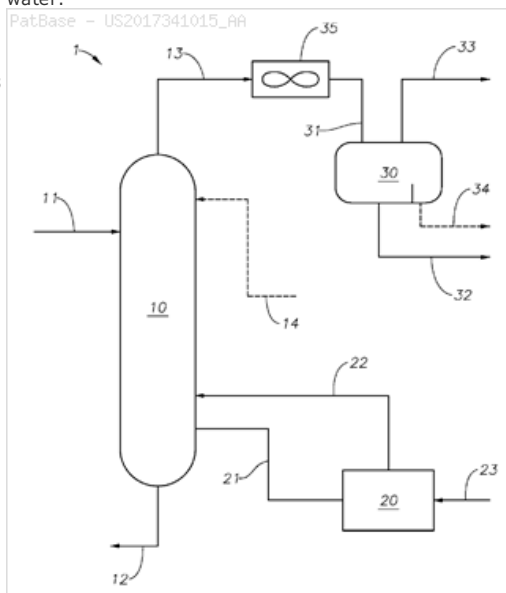
Title: REDUCING FOULING IN AMINE SYSTEMS

Abstract: The invention generally relates to processes for reducing fouling in amine systems and to equipment useful in such processes. Such amine systems are useful for removing one or more acidic gases such as CO₂ or H₂S from olefin containing hydrocarbon streams. The invention generally relates to minimizing residence time of foulant and foulant precursors at the relatively high temperature found in the amine regenerator and/or to purging the foulant and foulant precursors from the regenerator system. This is accomplished by operating the regenerator column as a stripper (no reflux) and re-routing reflux liquid containing foulant or foulant precursors to a processing location that is less prone to fouling or, optionally, by replacing the reflux liquid with fresh make-up amine or water.

Classifications:

International (IPC 8-9): B01D1/06 B01D19/00 B01D5/00 B01D53/14 C07C7/11 (Advanced/Invention)

CPC: B01D53/1425 C07C7/11 B01D53/1462 B01D1/06 B01D19/0073 B01D5/006 B01D2252/204 B01D3/143 B01D19/0015 Y02P70/34 B01D53/1468 B01D53/1475 B01D2252/20478 B01D2252/61 B01D2258/0283 B01D53/1493

**Family:**

Publication number	Publication date	Application number	Application date
US2017341015 AA	20171130	US20170495182	20170424
US10016719 BB	20180710	US20170495182	20170424

Priority:

US20160341712P 20160526 US20170495182 20170424

Probable Assignee: EXXON MOBIL CORP

Assignee(s): (std): EXXON MOBIL CORP ; EXXONMOBIL CHEMICAL PATENTS INC

Inventor(s): (std): SYMES RICHARD A

32) Family number: 67753279 (WO17208194A1)

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Title: DEVICE FOR COLLECTING WATER FROM ATMOSPHERIC AIR

Abstract: The invention relates to a device for collecting water from atmospheric air. The collector device of the invention comprises a first venturi and a second venturi, each having an inlet and an outlet. The second venturi is connected to the outlet of the first venturi. The device also includes a fan disposed operationally in the inlet of the first venturi and a vortex tube. The vortex tube comprises: an inlet connected to the outlet of the second venturi; a first side outlet in communication with the atmosphere; and a second side outlet. The collector device further comprises a coil having an inlet port connected to the second side outlet of the vortex tube, and an outlet port; and adsorption means located inside the coil.

Classifications:

International (IPC 8-9): B01D5/00 E03B3/28 (Advanced/Invention)

CPC: B01D5/00 E03B3/28

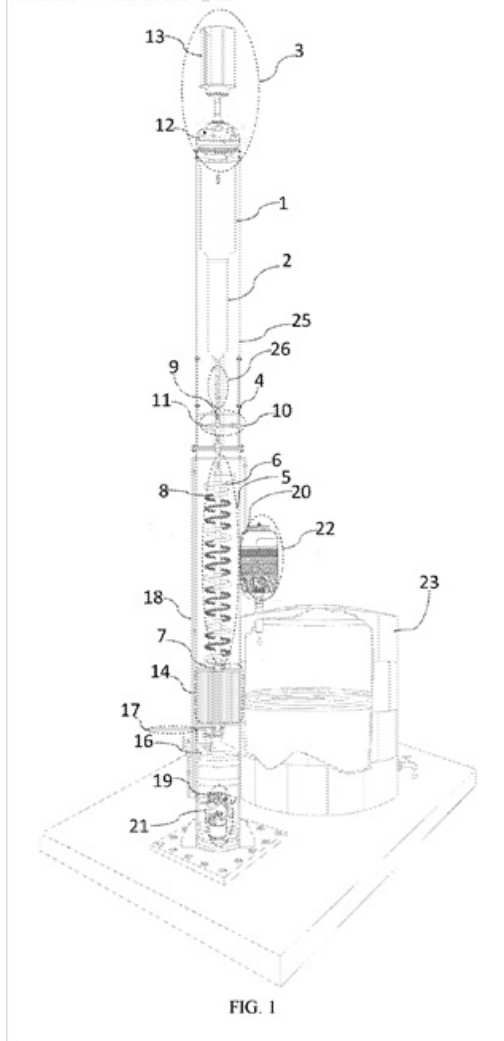


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
CO16144356 A1	20171215	CO20160144356	20160601
WO17208194 A1	20171207	WO20171B53251	20170601

Priority:

CO20160144356 20160601

Probable Assignee: QUIROZ GARCIA ABEL ANGEL**Assignee(s):** (std): QUIROZ GARCIA ABEL ANGEL**Assignee(s):** ABEL ANGEL QUIROZ GARCIA**Inventor(s):** (std): QUIROZ GARCIA ABEL ANGEL**Inventor(s):** ABEL ANGEL QUIROZ GARCIA**Agent(s):** CARLOS REINALDO OLARTE GARCIA; OLARTE CARLOS R

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

33) Family number: 67744751 (US2017349836A)

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Title: RECYCLING AND MATERIAL RECOVERY SYSTEM

Abstract: The present invention relates to recycling tires and the like utilizing a microwave service controlling the pressure from such a process enables a more even temperature and helps prevent the buildup of explosive gas.

Classifications:**International (IPC 8-9):** B01D53/04 B01J19/12 B03C7/06 C10B1/02

C10B19/00 C10B25/06 C10B25/16 C10B27/00 C10B27/06

C10B33/02 C10B51/00 C10B53/07 C10B7/06 C10G1/02

C10G1/10 (Advanced/Invention)

CPC: C10B53/07 C10G1/10 C10G1/02 C10B33/02 B03C7/06

C10B19/00 C10B7/06 C10B25/16 C09C1/482 B03C1/10 B03C1/30

C09C1/48 C10B25/06 C10B27/06 C10G2300/1003 B01D53/04

B01D2256/24

Publication number	Publication date	Application number	Application date
WO18013599 A1	20180118	WO2017US41581	20170711

Priority:

US20160360958P 20160711

Probable Assignee: TERRA PRIMORIS HOLDINGS LLC

Assignee(s): (std): MILLER ZANE A ; TERRA PRIMORIS HOLDINGS LLC ; YOUNG GREGORY E

Inventor(s): (std): MILLER ZANE A ; YOUNG GREGORY E

Agent(s): BYCER MATTHEW L

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

35) Family number: 68660354 (CN107718877A)

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Title: INK RECOVERY DEVICE FOR PRINTING PRESS

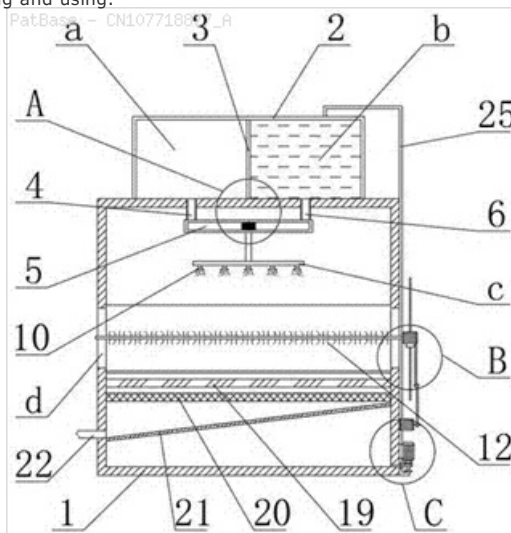
Abstract: The invention relates to the technical field of printing equipment, in particular to an ink recovery device for a printing press. The ink recovery device comprises a box, wherein a sloping plate is fixedly connected in the box, slide grooves are formed in the box, a brush is glidingly connected in the slide grooves, the right end of the brush is fixedly connected with a main motor, the bottom end of the main motor is fixedly connected with a slider which is glidingly connected with a slide bar, the right end surface of the slider is rotationally connected with a first connecting rod, the other end of the first connecting rod is rotationally connected with a second connecting rod, the other end of the second connecting rod is fixedly connected with an auxiliary motor, and the other end of the auxiliary motor is fixedly connected with the box. By means of arrangement of the sloping plate, the brush, the main motor, the slide bar and the slider, ink on the sloping plate can be cleaned, cleanness in the box is kept, the cleaned ink can be recovered, and the ink recovery device has huge economic benefit and broad market prospect and is worth popularizing and using.

Classifications:

International (IPC 8-9): B01D36/00 B41F31/20

B41F35/00 (Advanced/Invention)

CPC: B41F31/20 B01D36/00 B41F35/00



Family:

Publication number	Publication date	Application number	Application date
CN107718877 A	20180223	CN201711276040	20171206

Priority:

CN201711276040 20171206

Probable Assignee:

ZHANG FEIFEI

Assignee(s): (std):

ZHANG FEIFEI

Inventor(s): (std):

ZHANG FEIFEI