

Diego Gonzalez

1) Family number: 55520172 (US2014008206A)

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Title: CHAIN DRAG CARBONIZER, SYSTEM AND METHOD FOR THE USE THEREOF

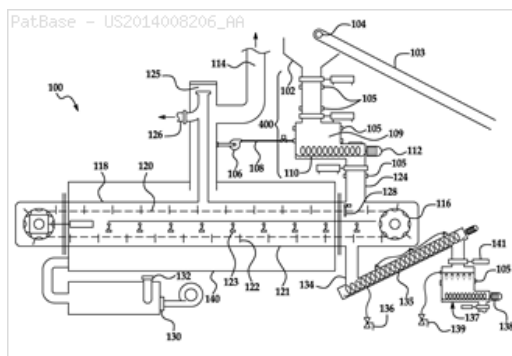
Abstract: A drag chain carbonizer is provided with a system and methods for anaerobic thermal transformation processing to convert waste into various solid carbonized products and varied further co-products. The drag-chain carbonizer includes an adjustable bed depth mechanism, a heating mechanism, a pressure management mechanism, and a chain tensioning mechanism containing at least one position sensor for communication of an actuator position to at least one programmable logic controller (PLC). Carbonaceous waste is transformed into useful co-products that can be re-introduced into the stream of commerce at various economically advantageous points. Depending upon the input materials and the parameters selected to process the waste, including real time economic and other market parameters, the system adjusts co-products output to reflect changing market conditions.

Classifications:

International (IPC 8-9): B01J6/00 B09B3/00 B65G23/44 C02F11/10 C08J11/12 C10B1/06 C10B47/32 C10B47/40 C10B53/00 C10B7/00 C10B7/06 C10G1/10 C10K1/10 C10K1/16 C10K1/18 F01K17/04 F22B1/18 (Advanced/Invention)

CPC: B01J6/008 C10B47/40 C10B53/00 C10K1/10 C10K1/16 C10K1/18 F01K17/04 F16T1/00 F22B1/18 Y02E20/14 Y02P20/129 C10B1/06 C10B7/00 Y02E20/12 Y02P20/145

US: 1/1 198/813 202/117 202/208 422/108 700/270



Family:

Publication number	Publication date	Application number	Application date
CA2878333 AA	20150102	CA20132878333	20130627
EP2870220 A1	20150513	EP20130813946	20130627
EP2870220 A4	20160309	EP20130813946	20130627
JP2015531796 T2	20151105	JP20150520519T	20130627
JP6081588 B2	20170215	JP20150520519T	20130627
MX2015000007 A1	20160425	MX20150000007	20130627
US2014008206 AA	20140109	US20130927904	20130626
US2014348710 AA	20141127	US20140457541	20140812
US2018056262 AA	20180301	US20170791516	20171024
US8801904 BB	20140812	US20130927904	20130626
US9795940 BB	20171024	US20140457541	20140812
WO14008100 A1	20140109	WO2013US48259	20130627

Priority:

US20120667751P 20120703 US20130793078P 20130315 US20130927904 20130626
WO2013US48259 20130627 US20140457541 20140812 US20170791516 20171024

Probable Assignee: AEMERGE LLC

Assignee(s): (std): AEMERGE LLC ; AMERGE LLC

Assignee(s): BEHRENS SCOTT ; MILLER LANDON CG ; RAYLES BRIAN

Inventor(s): (std): MILLER LANDON C G ; RAYLES BRIAN ; BEHRENS SCOTT

Inventor(s): MILLER LANDON CG

Agent(s): RIDOUT AND MAYBEE LLP; BUGNION GENEVE; BLUE FILAMENT LAW PLLC; AVERY N; GOLDSTEIN AVERY N

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

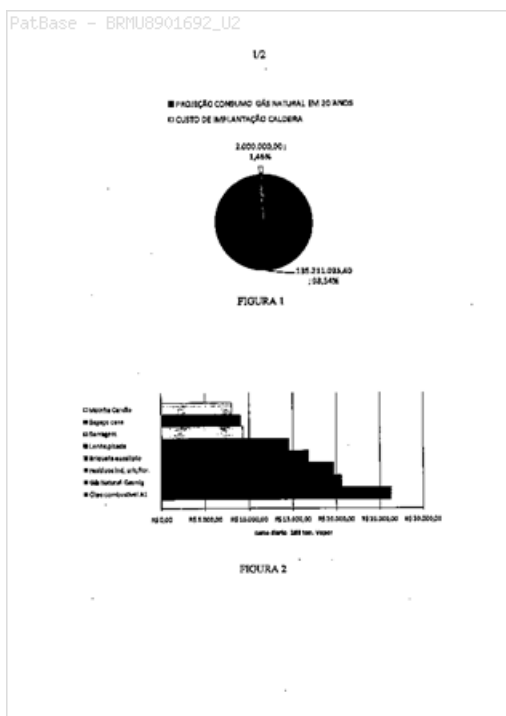
2) Family number: 49238891 (BRMU8901692U)

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Title: producao eficiente de vapor para industrias atraves da conservacao da energia em caldeiras a biomassa, substituindo os combustiveis fosseis oleo bpf e gas natural Efficient production of steam for industries through the conservation of energy in biomass boilers, replacing the fossil fuels oil and natural gas bpf (Machine translation)

Abstract: Source: BRMU8901692U [PT] . RESUMO "PRODUCAO EFICIENTE DE VAPOR PARA INDUSTRIAS ATRAVES DA CONSERVACAO DA ENERGIA EM CALDEIRAS A BIOMASSA, SUBSTITUINDO OS COMBUSTIVEIS FOSSEIS OLEO BPF E 5 GAS NATURAL". Patente de modelo de utilidade da nova forma de produzir vapor primando incondicionalmente pela conservacao da energia, atraves da correta especificacao da caldeira e do controle de combustao com analise continua de CO e O percent, Fig. 3, associado com a monitoracao da eficiencia da caldeira em tempo real, via PLC,10 (9), o analisador de CO esta ligado em cascata com o analisador de O2, que controla o excesso de ar, ou seja, o "set point" do excesso de ar sera ajustado em funcao da presenca de monoxido de carbono nos gases da chamine, o controle baseado na medicao de CO tem

Classifications:
International (IPC 8-9): F28C3/10 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
BRMU8901692 U2	20110705	BR2009MU01692U	20090429

Priority:

BR2009MU01692U 20090429

Probable Assignee: MAGOS BALTAZAR DOS REIS

Assignee(s): (std): MAGOS BALTAZAR DOS REIS

Assignee(s): BALTAZAR DOS REIS MAGOS

Inventor(s): (std): MAGOS BALTAZAR DOS REIS

Inventor(s): BALTAZAR DOS REIS MAGOS

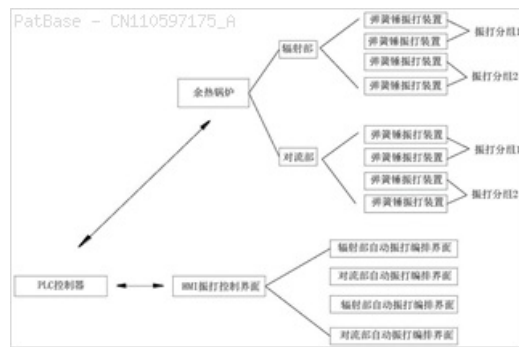
3) Family number: 76997270 (CN110597175A)

Title: One kind of waste heat boiler rapping control system and method (Machine translation)

Abstract: Source: CN110597175A **Machine translation:** The present invention discloses a waste heat boiler rapping control system and method, comprising: waste heat boiler; provided several springs and rapping hammer rapping device is divided into several packets, its time and space independently adjustable ;HMI rapping rapping rapping control interface display control means: for HMI control interface includes automatic ,HMI rapping rapping choreography: PLC controller; PLC controller communication interface is connected to the HMI control device for storing each spring rapping hammer rapping device number, receive control commands sent by the control device HMI rapping, rapping rapping packet packet grouping instructions, each group of rapping and the interval setting command, and accordingly the packet sequentially controlling each set rapping rapping. By the present invention, the process can produce according to the different periods and different operating conditions, according to the boiler, the boiler fouling conditions in real-time adjustment, so as to achieve reinforced rapping device grouping rapping effect, remove the boiler fouling to ensure that the copper pyrometallurgical production smoothly.

Classifications:

International (IPC 8-9): G05B19/05 (Advanced/Invention)



Family:

Publication number	Publication date	Application number	Application date
CN110597175 A	20191220	CN201911006455	20191022

Priority:

CN201911006455 20191022

Probable Assignee:

ZIJIN COPPER CO LTD

Assignee(s):

ZIJIN COPPER CO LTD

4) Family number: 52700765 (CN202649769U)

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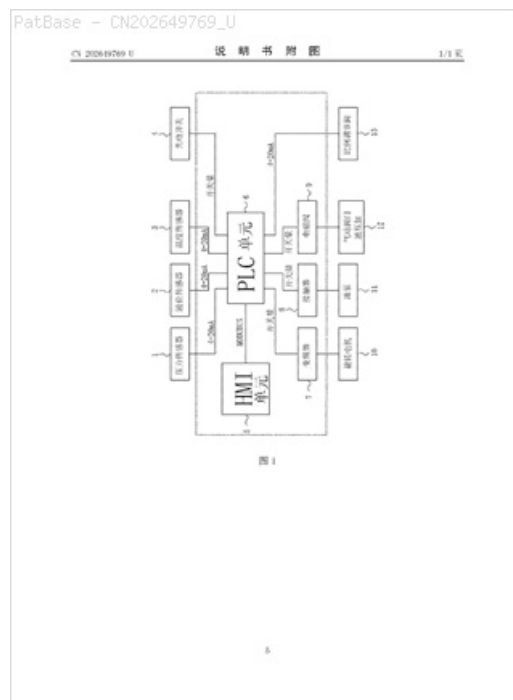
Title: STERILIZATION BOILER CONTROL SYSTEM

Abstract: The utility model relates to an automatic control system, especially to an automatic control system of the food industry. A sterilization boiler control system provided by the utility model is formed by a control unit arranged inside a control cabinet. The control unit comprises a programmable logic controller (PLC) unit and a human machine interface (HMI) unit connected to the PLC unit. A signal collection port of the PLC unit is connected with ports of a pressure sensor, a liquid level sensor, a temperature sensor and a photoelectric switch of the sterilization boiler; and a signal control port of the PLC unit is also connected to a rotating electrical machine, an oil pump, a pneumatic valve hydraulic cylinder of the sterilization boiler respectively by a frequency converter unit, a contactor unit and an electromagnetic valve unit and is directly connected to a proportioning valve. According to the utility model, the provided sterilization boiler control system is used for carrying out segmentation control on the operation of the sterilization boiler.

Classifications:

International (IPC 8-9): G05B19/05 (Advanced/Invention)

CPC: Y02P80/12



Family:

Publication number	Publication date	Application number	Application date
CN202649769 U	20130102	CN201220325667U	20120706

Priority:

CN201220325667U 20120706

Probable Assignee:

XIAMEN NEWLUKE IND AUTOMATION CO LTD

Assignee(s): (std):

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Assignee(s):

XIAMEN NEWLUKE INDUSTRIAL AUTOMATION CO ; XIAMEN NEWLUKE INDUSTRIAL AUTOMATION CO LTD

Inventor(s): (std):

CAI ZAIJIA ; CAI GUOYONG

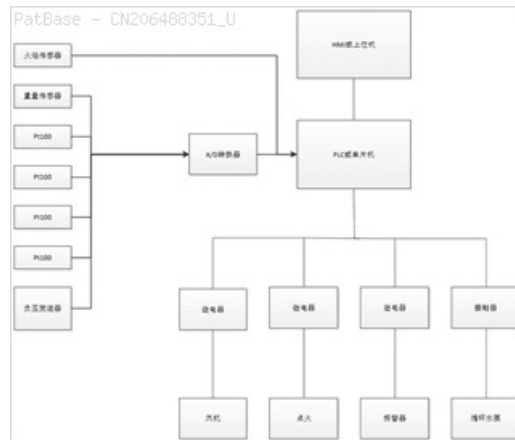
Title: METHYL ALCOHOL BOILER INTELLIGENCE CONTROL SYSTEM

Abstract: The utility model provides a methyl alcohol boiler intelligence control system, includes host computer or HMI touch-sensitive screen, the next quick-witted PLC or singlechip, PLC or singlechip are connected with multichannel temperature sensor, vacuum changer, level sensor or weighing transducer, photoelectric sensor, AD converter and isolation relay electricity respectively, and the next quick-witted PLC or singlechip still are connected with fan switch, some firearm water pump and control fuel supply's solenoid valve electricity respectively. The utility model discloses a methyl alcohol boiler intelligence control system to PLC or singlechip are the core, through sensor and each equipment of setting on key equipment or device or the controlling means who installs, match corresponding operating software, realize both having practiced thrift the manpower to the automatic control of methyl alcohol boiler, alleviate intensity of labour, have still reduced energy loss, keep indoor temperature to last in reasonable scope.

Classifications:

International (IPC 8-9): F24D15/00 F24D19/10 (Advanced/Invention)

CPC: Y02B10/70



Family:

Publication number	Publication date	Application number	Application date
CN206488351 U	20170912	CN201621096561U	20160930

Priority:

CN201621096561U 20160930

Probable Assignee: SHANXI YUNENG TECH DEVELOPMENT CO LTD

Assignee(s): (std): SHANXI YUNENG TECH DEVELOPMENT CO LTD

Assignee(s): SHANXI YUNENG TECHNOLOGY DEVELOPMENT CO ; SHAN XI YU TECHNOLOGY DEVELOPMENT CO LTD

Inventor(s): (std): YANG YONGNING ; XU FANGYAN ; GONG XIAOBIN

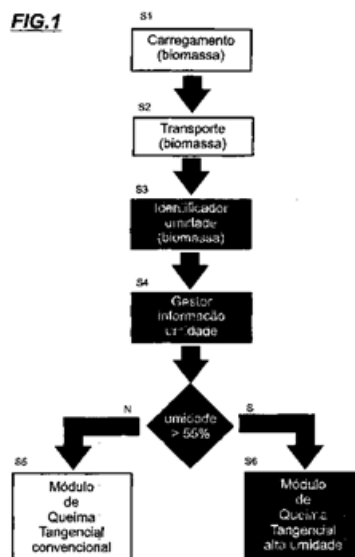
Title: SISTEMA HIBRIDO DE QUEIMA TANGENCIAL DE BIOMASSA EM SUSPENSÃO COM VARIACÃO DE UMIDADE APLICADO EM EQUIPAMENTO CALDEIRA AQUATUBULAR HYBRID SYSTEM TANGENTIAL BURNING OF BIOMASS IN SUSPENSION WITH MOISTURE variation USED EQUIPMENT BOILER Watertube (Machine translation)

Abstract: Source: BR102013018012A [PT] 1 RESUMO DE PATENTE DE INVENÇÃO "SISTEMA HIBRIDO DE QUEIMA TANGENCIAL DE BIOMASSA EM SUSPENSÃO COM VARIACÃO DE UMIDADE APLICADO EM EQUIPAMENTO CALDEIRA AQUATUBULAR" representado por uma solução evolutiva em •) 5 sistema de queima tangencial de biomassa em suspensão aplicado em equipamento do tipo caldeiras aquatubulares, especialmente aqueles utilizados nas de processamento de cana de açúcar, cuja biomassa, na forma de bagaço de cana de açúcar apresenta grande variação de teor de umidade, sendo que visando um sistema de queima eficaz para qualquer teor de umidade foi idealizado um sistema híbrido, cuja especificação tem como base tecnológica o sistema de queima tangencial convencional, para uma caldeira composta de fornalha (D8) e grelha do tipo Flat Pin-Hole (D7), diferenciado por apresentar um módulo identificador de umidade (S3) e um módulo gestor informação de umidade (S4) que define o modo operacional do sistema híbrido, que por sua vez é definido por dois modos, sendo o modo.1, dito convencional acionado quando a umidade da biomassa apresenta valor < 55 percent, e um modo.2 acionado quando a umidade da biomassa apresenta valor > 55 percent, sendo este modo diferenciado pelo acionamento conjunto de queimadores (D6) introduzidos ao conjunto de bicos tangenciais das colunas de bicos tangenciais (D5) definidas nas extremidades internas da fornalha (D8) da caldeira. **Machine translation:** 1 Summary of Invention Patent "HYBRID SYSTEM OF TANGENTIAL BURNING OF BIOMASS in suspension WITH MOISTURE variation USED EQUIPMENT BOILER Watertube" represented by an evolutionary solution in •) 5 System tangential firing biomass in suspension applied in electric-type water tube boilers, especially those used in the sugar cane processing, whose biomass in the form of bagasse from sugar cane has great moisture content variation, and aiming an effective firing system for any content moisture was idealized a hybrid system, whose specification is based on the system of conventional tangential firing, for a boiler composed of forms NaLha (D8) and grid type Flat Pin-Hole (D7), differentiated by presenting a moisture identifier module (S3) and a module manager information wetness (S4) which defines the operational mode of the hybrid system, which in turn is defined by two ways, being the modo.1, said conventional activated when moisture biomass has value and it; 55 percent, and modo.2 triggered when the moisture biomass has value and gt; 55 percent, this being so differentiated by the drive set of burners (D6) introduced to the set of tangential nozzles of the columns of tangential nozzles (D5) defined former 20 sary internal extremities of the furnace (D8) of the boiler.

Classifications:

International (IPC 8-9): F22B15/00 (Advanced/Invention)

FIG.1

**Family:**

Publication number	Publication date	Application number	Application date
BR102013018012 A2	20150901	BR20131018012	20130715

Priority:

BR20131018012 20130715

Probable Assignee: SEMATEC IND E MONTAGENS LTDA**Assignee(s):** (std): CHRISTIANO ANTONIO CARLOS ; SEMATEC IND E MONTAGENS LTDA**Assignee(s):** SEMATEC INDUSTRIA E MONTAGENS LTDA ; ANTONIO CARLOS CHRISTIANO**Inventor(s):** (std): CHRISTIANO ANTONIO CARLOS**Inventor(s):** ANTONIO CARLOS CHRISTIANO**7) Family number: 49410021 (US2011200954A)**

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Title: RENEWABLE ENERGY MICROGENERATION SYSTEM

Abstract: A renewable energy microgeneration system is disclosed. The system includes a portable processing container with a mixing tank for mixing waste with a liquid, a macerating pump in fluid communication with the mixing tank that is configured to macerate the waste into smaller pieces, a plurality of small holding tanks in fluid communication with the mixing tank that are configured to perform at least one of a pasteurization thermophilic anaerobic digestion on the waste, a large holding tank in fluid communication with the plurality of small holding tanks that is configured to perform mesophilic anaerobic digestion on the waste after at least one of a pasteurization thermophilic anaerobic digestion is performed on the waste, and a de-watering unit in fluid communication with the large holding tank that is configured to dry what remains of the waste after mesophilic anaerobic digestion is performed on the waste; a controller for automating the flow of the waste between the mixing tank, the plurality of small holding tanks, the large holding tank, and the de-watering unit such that a user does not need to complete any tasks for performing mesophilic anaerobic digestion after the waste is loaded into the mixing tank; and a portable gas storage container comprising a gas storage tank that is configured to store biogas generated by the mesophilic anaerobic digestion, wherein the portable processing container and the portable gas storage container are configured to be transported to a site and placed in fluid communication with each other so the gas storage tank can store biogas generated by mesophilic anaerobic digestion in the processing container at the site.

Classifications:

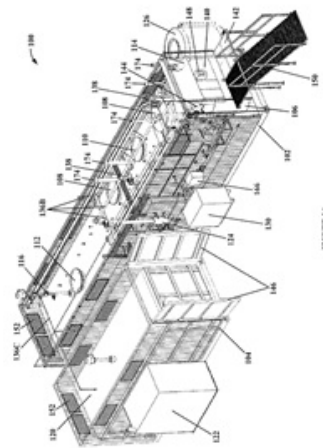
International (IPC 8-9): B09B3/00 C02F11/04 C02F3/00 C02F3/28 C05F11/00 C05F17/00 C05F17/02 C05F3/00 C05F3/06 C05F7/00 C05F9/00 C05F9/02 C10L3/10 C12M C12M1/00 C12M1/107 F02D19/02 F02M21/02 F23L7/00 F23Q2/32 H02K7/18 (Advanced/Invention);

C12M1/107 (Core/Invention);
C12M (Subclass/Invention)

CPC: C12M1/107 C05F17/20 C05F17/50 C05F17/914 C05F17/964 C12M21/04 C12M23/36 C12M23/52 C12M23/58 C12M43/08 C12M45/20 C05F3/00 C05F3/06 C05F7/00 C05F9/00 C05F9/02 C05F11/00 Y02A40/205 Y02A40/208 Y02A40/213 Y02A40/214 Y02A40/215 Y02E50/343 Y02P20/129 Y02P20/133 Y02P20/136 Y02P20/145 Y02P20/59 Y02T10/16 Y02W10/37 Y02W30/43 Y02W30/47 C02F3/006 C02F3/28 C02F3/2866 C02F11/04 C02F2301/106 C02F2303/02 C02F2303/26 H02K7/1815

European: C12M21/04 C12M23/36 C12M23/52 C12M43/08 C12M45/20 Y02E50/34B

US: 1/1 210/104 210/138 210/143 210/150 210/151 210/173 210/175 210/259 210/603 210/609 210/612 210/614 290/1R 431/2 431/253 431/253S 431/2P 435/262 435/262S 435/290.4 435/290.400S 71/10

**Family:**

Publication number	Publication date	Application number	Application date
AP201206558 A0	20121231	AP20120006558	20110412
AP3961 A	20161224	AP20120006558	20110412
AU2011241894 AA	20111020	AU20110241894	20110412
AU2011241894 AA	20121129	AU20110241894	20110412
AU2011241894 BB	20160121	AU20110241894	20110412
BR112012026027 A2	20151006	BR20121126027	20110412
CA2796318 AA	20111020	CA20112796318	20110412
CA2796318 C	20170530	CA20112796318	20110412
CL2012003306 A1	20141121	CL20120003306	20121126
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CN103189494 A	20130703	CN201180028990	20110412
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CN104357316 A	20150218	CN201410498852	20110412
CN104357316 B	20171003	CN201410498852	20110412
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EA030144 B1	20180629	EA20120001399	20110412
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EP2504420 A2	20121003	EP20110748711	20110412
EP2781589 A1	20140924	EP20140164699	20110412
GB201203901 A0	20120418	GB20120003901	20110412
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HK1182126 A1	20160729	HK20130109554	20130815
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HK1182126 A1	20160729	HK20130109554	20130815
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IN09713DN2012 A	20140613	IN2012DN09713	20121109
JP2013529126 T2	20130718	JP20130504357T	20110412
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MX2012011958 A1	20130320	MX20120011958	20110412
MX338720 B	20160427	MX20120011958	20110412
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US2011200954 AA	20110818	US20110085320	20110412
US2012312742 AA	20121213	US20120526024	20120618
US2013264279 AA	20131010	US20130910682	20130605
US2016130166 AA	20160512	US20160995407	20160114
US2017247278 AA	20170831	US20170596479	20170516
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US8465645 BB	20130618	US20120526024	20120618
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US9682880 BB	20170620	US20160995407	20160114
US10384969 BB	20190820	US20170596479	20170516
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Priority:

US20100348186P 20100412	US20100323186P 20100412	US20100348689P 20100526
US20100323186P 20101204	CN201180028990 20110412	EP20110748711 20110412
US20110085320 20110412	WO20111B01279 20110412	US20120526024 20120618
US20130910682 20130605	US20160995407 20160114	US20170596479 20170516

Probable Assignee: SEAB ENERGY LTD

Assignee(s): (std): BH24 3DA ; SASSOW NICOLAS W ; SEAB ENERGY HOLDINGS LTD ; SEAB ENERGY LTD

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Inventor(s): NICOLAS W SASSON ; NICOLAS W SASSOW

Agent(s): LESICAR MURRAY TRENTO; MURRAY TRENTO AND ASSOCIATES; MURRAY TRENTO AND ASSOCIATES PTY LTD; BROUILLETTE AND ASSOCIES PARTNERS; BROUILLETTE LEGAL INC; ANDES IP; ELIANA REYES FERNANDEZ; FRY DAVID JOHN; SAYER ROBERT DAVID; BAKER BOTTS LLP; BAKER BOTTS L L P

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI 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

8) Family number: 68761684 (BR102016005913A)

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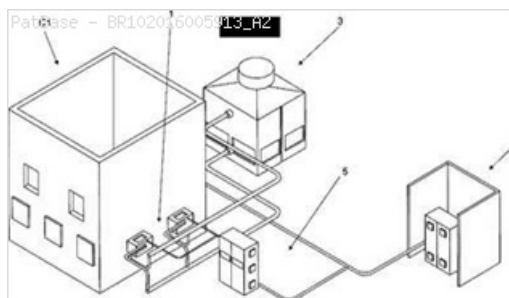
Title: SISTEMA DE AUXILIO A COMBUSTAO Combustion ASSISTANCE SYSTEM OF (Machine translation)

Abstract: Source: BR102016005913A [PT] RESUMO SISTEMA DE AUXILIO A COMBUSTAO. A invencao compreende um sistema que inclui pelo menos um conjunto de emissao de micro-ondas (1) internado na camara de combustao de caldeiras, fornalhas (C1) e GGQ's, com efeito potencializador/catalizador da combustao, quer seja o material a ser queimado biomassa ou combustiveis fosseis ou biomassa (2), sendo o mencionado pelo menos um conjunto de emissao de micro-ondas (1) conectado a um dispositivo de arrefecimento/resfriamento a agua (3); ainda de acordo com a invencao, para acionamento dos emissores de micro-ondas (1) sao utilizados equipamentos Tiristores, Controladores de Potencia e reles de estado solido (4), ao passo que o sistema e todo automatizado e controlado por um CLP (Controlador Logico Programavel) e interfaces de operacao IHM (Interface Homem Maquina) e/ou software Supervisorio; a unidade de controle eletronico (5), representada mediante diagrama eletrico, e de potencia (6) sao separados. Peticao «70160009561, de 17/03/2016, pag. 26/51 **Machine translation:** Combustion AID SYSTEM. The invention comprises a system that includes at least one microwave emission assembly (1) admitted into the combustion chamber of boilers, furnaces (C1) and GGQ's, with potentiating/catalyst for combustion, either the material to be combusted biomass or fossil fuels or biomass (2), being said at least one microwave emission assembly (1) connected to a cooling device/cooling water (3); further according to the invention for actuation of Microwave emitters (1) are used thyristor equipment, power controllers are solid state relays (4), while the system and automated and controlled by a PLC (programmable logic controller) and operating interfaces HMI (Human Machine Interface) and/or supervisory software; Electronic control unit (5), represented by electrical diagram, and (6) are separated. "70160009561 repeat of 17/03/2016, pp. 26/51

Classifications:

International (IPC 8-9): C01B3/34 (Advanced/Invention)

International (IPC 1-7): C01B3/34



Family:

Publication number	Publication date	Application number	Application date
BR102016005913 A2	20170919	BR20161005913	20160317

Priority:

BR20161005913 20160317

Probable Assignee: ADBELTO GARCIA BORGES

Assignee(s): (std): ADBELTO GARCIA BORGES ; MARCOS ROBERTO BORGES

Inventor(s): (std): ADBELTO GARCIA BORGES ; MARCOS ROBERTO BORGES