

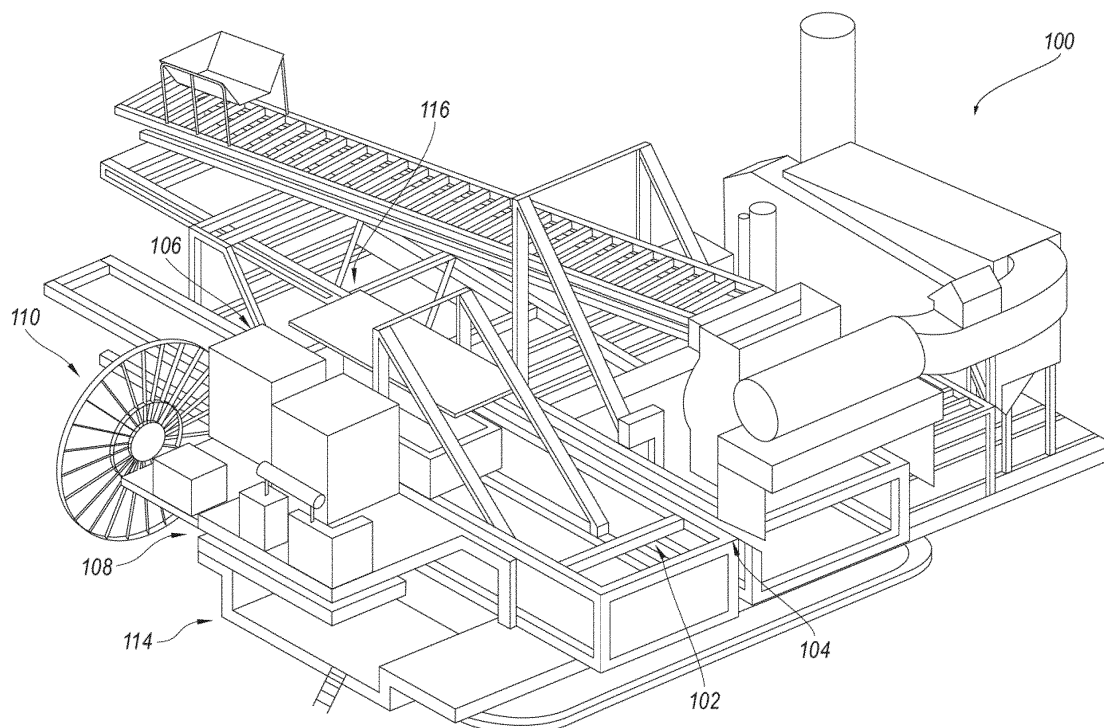
10 Documents

Publication numbers	Title	Current assignees
US20170183569 A1	Method and system for dynamically charging a coke oven	SUNCOKE TECHNOLOGY
WO200118150 A2	Energy recovery coke oven facility producing high quality metallurgical coke	SESA GOA
US6059932 A	Coal bed vibration compactor for non-recovery coke oven	PENNSYLVANIA COKE TECHNOLOGY
EP-188768 A2	Apparatus for cleaning leveler doors and leveler door jambs of coke oven chambers	GEWERKSCHAFT SCHALKER EISENHÜTTE MASCHINENFABRIK GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG
US3912091 A	Coke oven pushing and charging machine and method	ELK RIVER RESOURCES
DE10335847 A1	Electric reducing furnace	SMS SIEMAG
CN104962298 A	Method and system for controlling internal suction-method smokeless coal charging process of tamping coke oven	JINAN HONGKEXINTAI ENVIRONMENTAL PROT TECHNOLOGY
CA2100867 A1	Coke feed device with housing for a coke dry cooling installation	RUHRKOHL, ...
KR101299822 B1	Cleaning apparatus of leveller door in coke oven	POSCO
US3784034 A	Coke oven pushing and charging machine and method	ELK RIVER RESOURCES

Family 1/10 - FAMPAT - ©Questel

Title

(WO2017117282)

Method and system for dynamically **charging** a **coke** oven**Images****Publication data including kind & date**

US20170183569	A1	2017-06-29	US20170183569
CA3009822	A1	2017-07-06	CA3009822
WO2017117282	A1	2017-07-06	WO2017117282
CO2018006493	A2	2018-07-10	CO2018006493
BR112018013220	A1	2018-07-10	BR112018013220
AU2016382975	A1	2018-07-19	AU2016382975

**Abstract**

(WO2017117282)

Systems and methods of dynamically **charging** coal in **coke** ovens related to the operation and output of **coke** plants including methods of automatically **charging** a **coke** oven using a **charging** ram in communication with a control system to increase the **coke** output and **coke** quality from **coke** plants. In some embodiments, the control system is capable of moving the **charging** ram in a horizontal first direction, a horizontal second direction and a vertical third direction while **charging** coal into the oven. In some embodiments, the coal **charging** system also includes a scanning system configured to scan an oven floor to generate an oven floor profile and/or oven capacity. The scanning system used in combination with the control system allows for dynamic leveling of the **charging** ram throughout the **charging** process. In some embodiments, the **charging** ram includes stiffener plates and support members to increase the mechanical strength of the **charging** ram and decrease the sag of the **charging** ram at a distal end.

Inventors

QUANCI JOHN FRANCIS

CHOI CHUN WAI

BALL MARK ANTHONY

Latest standardized assignees - inventors removed

Publication dates

2018-07-19

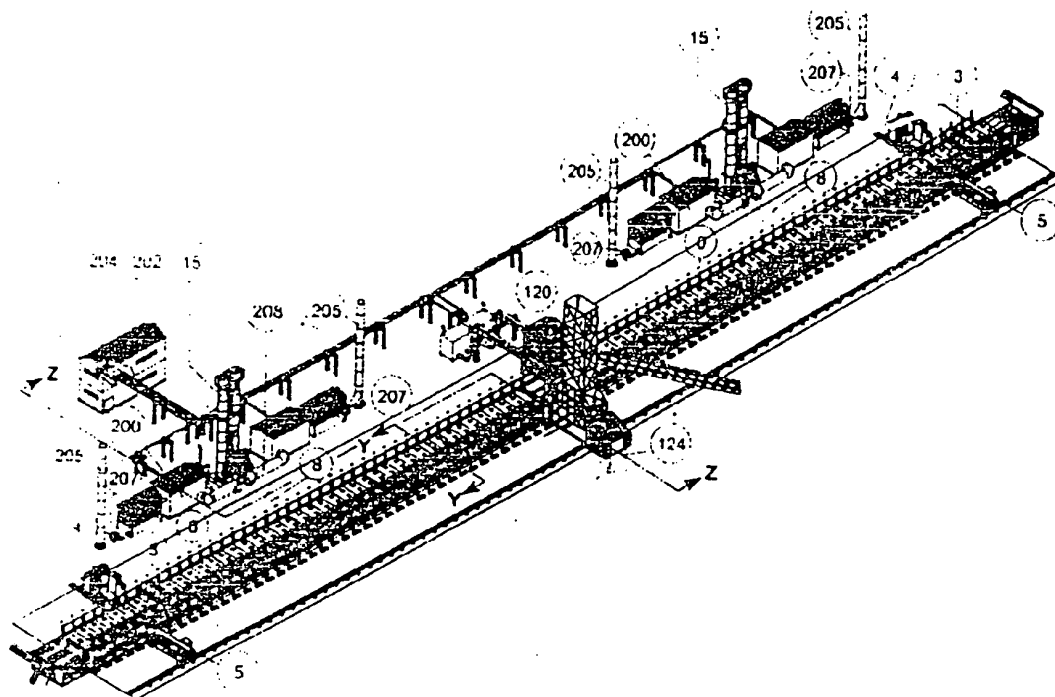
Title

(EP1216286)

Energy recovery coke oven facility producing high quality metallurgical coke

Images

Fig.1



Publication data including kind & date

WO200118150	A2	2001-03-15	WO200118150
AU1411201	A	2001-04-10	AU200114112
WO200118150	A3	2001-05-10	WO200118150
WO200118150	B1	2001-07-26	WO200118150
EP1216286	A1	2002-06-26	EP1216286
BR0014261	A	2004-03-09	BR200014261
BRPI0014261	A1	2004-03-09	BRPI0014261
IN0640/BOM/1999	A	2005-05-06	IN1999BO00640
BRPI0014261	A2	2010-03-16	BR200014261
EP1216286	B1	2010-09-15	EP1216286



[AT481466](#)

T 2010-10-15 ATE481466

[DE60044975](#)

D1 2010-10-28 DE60044975

[BR0014261](#)

B1 2011-03-09 BR200014261

Abstract

(EP1216286)

This invention comprises a complete arrangement of ovens, underflues, cooling air ducts under the oven, the feeder flue, to control dampers in the feeder flues, the common flues, the **charge** car operating over the ovens the ram car operating on one side of the ovens and the hot **coke** car operating on the other side of the ovens, the oven doors, the **door** opening/closing mechanism, the coal bin tower with the weighbridge, the quench tower and the feed of the flue gases to boilers of the power plant. The oven is a specially designed structure made of various qualities and shapes of refractory bricks designed to withstand the high temperatures. The combustion is controlled by allowing air in and the hot waste gases are led to a common flue refractory lined inside to withstand the high temperature. The waste gases are led to the boiler for producing steam and electric power in a turbine/generator for energy recovery or alternatively led to an oven stack of sufficient height to maintain a draft in the oven to sustain the coking process.

Inventors

DE LIMA PFX

Latest standardized assignees - inventors removed

SESA GOA

Publication dates

2001-03-15

2001-04-10

2001-05-10

2001-07-26

2002-06-26

2004-03-09

2004-03-09

2005-05-06

2010-03-16

2010-09-15

2010-10-15

2010-10-28

2011-03-09

Family 3/10 - FAMPAT - ©Questel

Title

(US6059932)

Coal bed vibration compactor for non-recovery **coke** oven**Images**

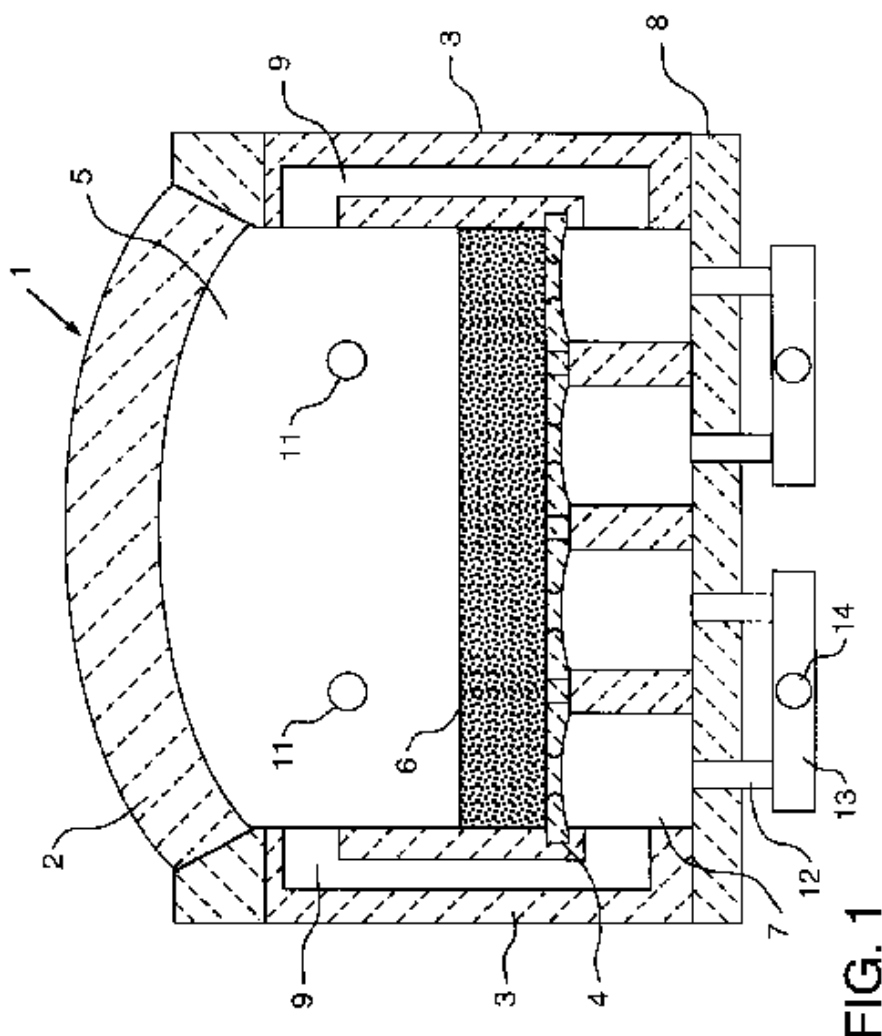


FIG. 1

Publication data including kind & date

US6059932

A

2000-05-09

US6059932

**Abstract**

(US6059932)

A coal compaction system and method for a non-recovery **coke** oven having refractory roof, floor, side walls and end doors for coal **charging** and **coke** discharge provides an improved coal **charging** machine carrying a coal conveyor supported intermediate the ends of the conveyor to avoid conveyor sagging and non-uniform depth of a deposited coal bed, a number of pressurized fluid-driven vibratory compactors mounted on an end of the **charging** machine and spaced-apart across the width of the coal bed and serving to compact the coal bed on a retraction stroke of the **charging** machine, a pivoted lifting frame mounted on the **charging** machine above the compactors and from which the compactors individually are suspended and are provided with individual supply of pressurized fluid, and a **coke** pusher head mounted on the **charging** machine

behind the compactors and serving, when the lifting frame and associated compactors are raised, to push finished coke from the coke oven.

Inventors

STURGULEWSKI RAYMOND M

Latest standardized assignees - inventors removed

PENNSYLVANIA COKE TECHNOLOGY

Publication dates

2000-05-09

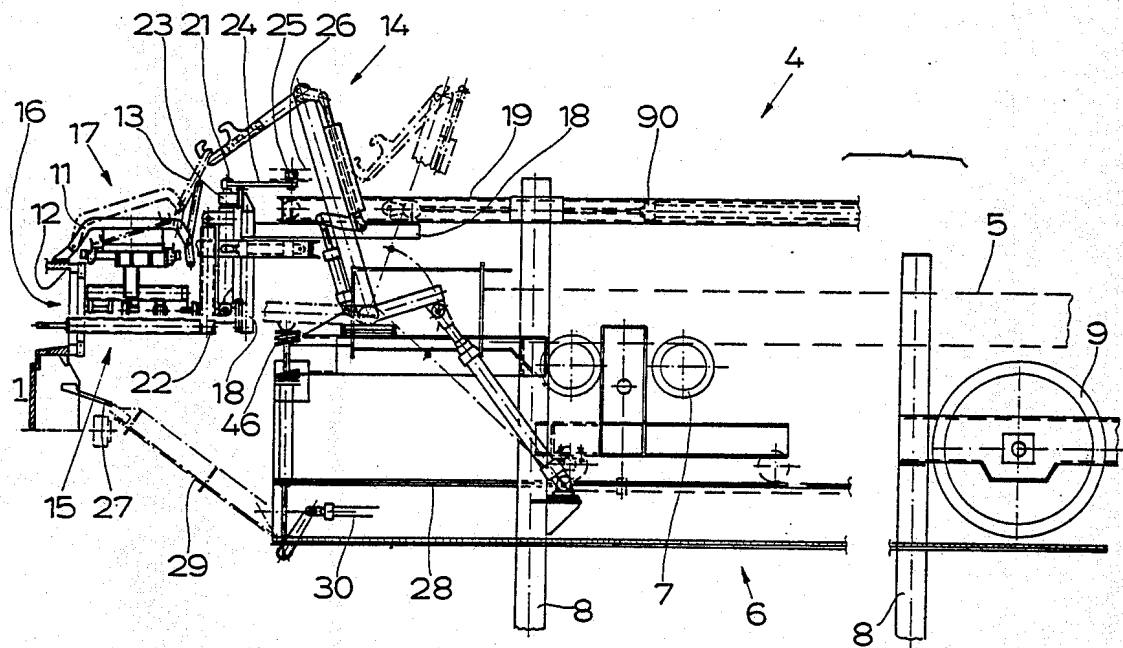
Family 4/10 - FAMPAT - ©Questel

Title

(EP-188768)

Apparatus for cleaning leveler doors and leveler door jambs of coke oven chambers

Images



Publication data including kind & date

EP0188768	A2	1986-07-30	EP-188768
EP0188768	A3	1988-01-27	EP-188768
US4808268	A	1989-02-28	US4808268
EP0188768	B1	1990-07-25	EP-188768
DE3502488	C1	1990-08-02	DE3502488
AT54932	T	1990-08-15	ATE054932
DE3578896	D1	1990-08-30	DE3578896
KR910009183	B1	1991-11-04	KR910009183



Abstract

(EP-188768)

An apparatus is provided for cleaning the leveling doors and leveling **door** frames of coking chambers in a coking oven. The coking oven has a leveling device located on the machine side with a leveling rod and a device for supporting and pushing the leveling rod. The leveling device is preferably movable in the longitudinal direction of the coking oven. The leveling doors are pivotably articulated on the leveling **door** frames, and each is provided with a closing device.

(From US4808268 A)

Inventors

FELDHAUS, KARL

Latest standardized assignees - inventors removed

GEWERKSCHAFT SCHALKER EISENHÜTTE MASCHINENFABRIK GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG

Publication dates

1986-07-30

1988-01-27

1989-02-28

1990-07-25

1990-08-02

1990-08-15

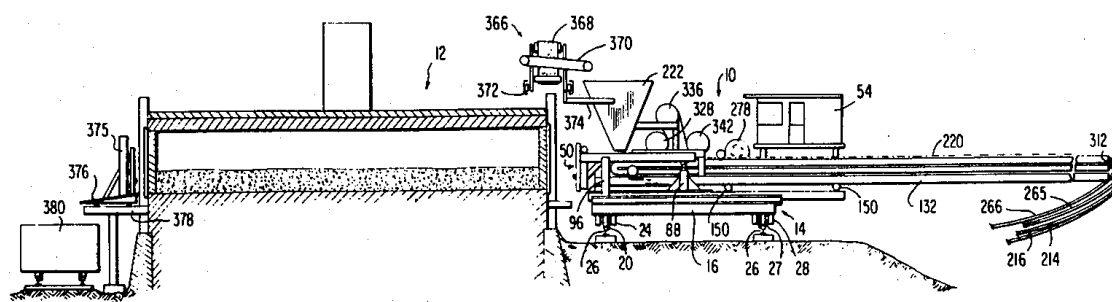
1990-08-30

1991-11-04

Family 5/10 - FAMPAT - ©Questel

Title

(US3912091)

Coke oven pushing and **charging** machine and method**Images****Publication data including kind & date**

US3912091	A	1975-10-14	US3912091
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CA985203	A	1976-03-09	CA-985203
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**Abstract**

(US3912091)

A combined **coke** oven pushing and **charging** machine is supported on tracks for movement along the front of a bank of **coke** ovens and is operable to open an oven **door**, push the **coke** from the open oven, and close the oven **door**, and to open the **door** of an adjacent empty oven, **charge** the oven with a uniform, level, compact **charge** of coal, and close the **door**. The machine is then moved along the track a distance equal to the width of one oven, a second oven is pushed, and the oven previously pushed is **charged**. The pusher head is provided with roller supports adapted to roll along the oven floor during the pushing operation, and the head is water cooled to prevent warping and damage by the intense heat of the **coke**. The coal is deposited into the empty ovens by a drag-type endless chain conveyor having a width substantially equal to the width of the coking chambers and which is telescoped into the oven from the pusher **door** opening. The generally horizontal cantilevered conveyor simultaneously fills, levels, and compacts the coal in the coking chamber.

Inventors

THOMPSON BUSTER RAY

Latest standardized assignees - inventors removed

ELK RIVER RESOURCES

Publication dates

1975-10-14

1976-03-09

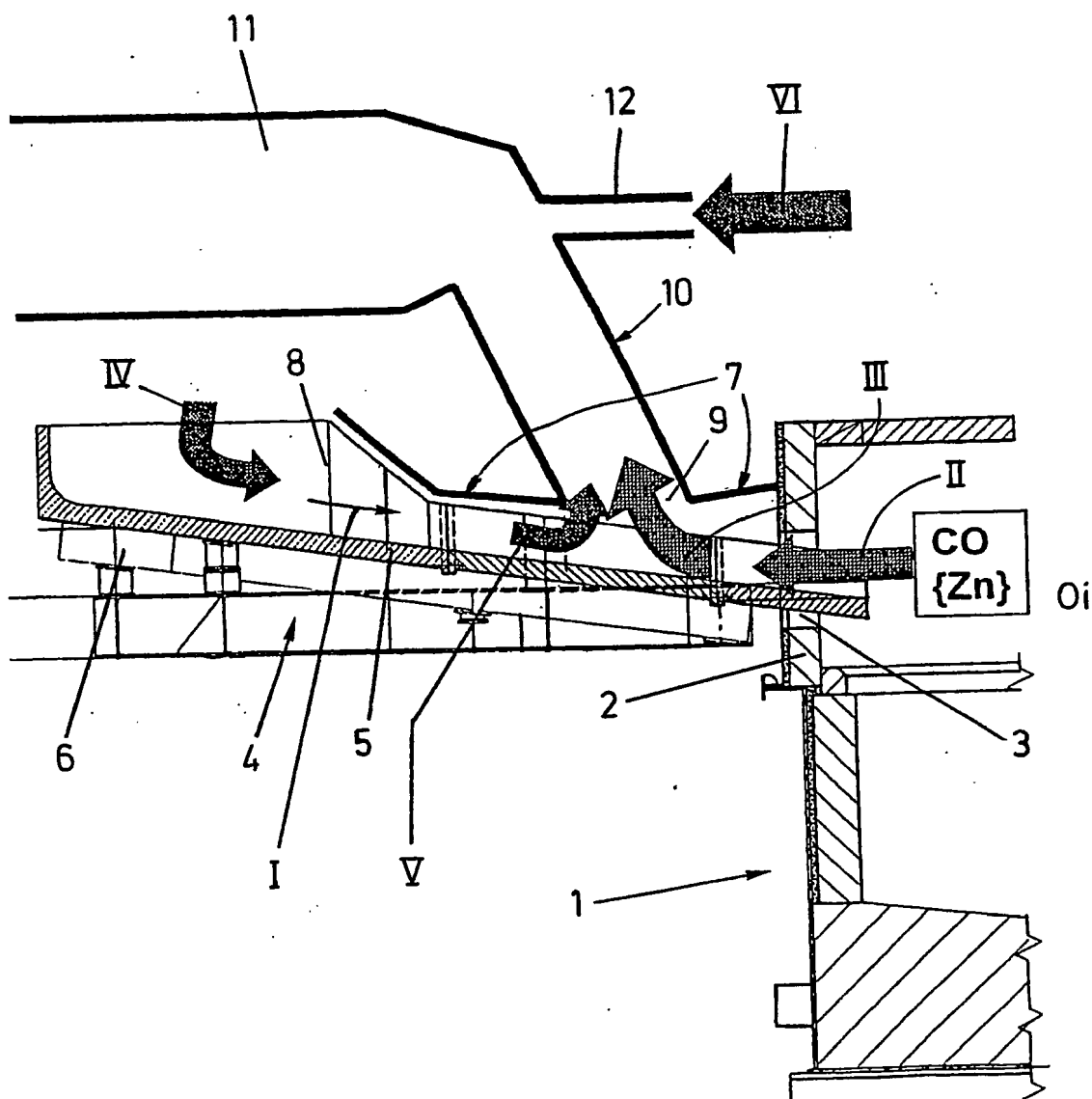
Family 6/10 - FAMPAT - ©Questel

Title

(EP1658467)

Electric reducing furnace

Images



Publication data including kind & date

DE10335847	A1	2005-02-17	DE10335847
WO2005022062	A1	2005-03-10	WO200522062
CA2534623	A1	2005-03-10	CA2534623
AU2004269087	A1	2005-03-10	AU2004269087
CL2004001844	A1	2005-05-20	CL1844200400
MXPA06001136	A	2006-04-24	MX2006PA001136
EP1658467	A1	2006-05-24	EP1658467
CN1829891	A	2006-09-06	CN1829891
BRPI0413109	A	2006-10-03	BR200413109
BRPI0413109	A1	2006-10-03	BRPI0413109
ZA200510205	B	2006-10-25	ZA200510205
IN0680/CHENP/2006	A	2007-06-29	IN2006CN00680
EP1658467	B1	2007-11-07	EP1658467
AT377740	T	2007-11-15	ATE377740



DE502004005447	D1	2007-12-20	DE502004005447				
ES2293277	T3	2008-03-16	ES2293277				
IN229531	B	2009-03-27	IN-229531				
CN100537784	C	2009-09-09	CN100537784C				
AU2004269087	B2	2010-05-20	AU2004269087				
CA2534623	C	2011-11-15	CA2534623				
BRPI0413109	A2	2015-04-22	BR200413109				

Abstract

(EP1658467)

The invention relates to an electric reducing furnace (1) for carrying out reduction processes, particularly for reducing slag in order to recover metallic constituents. The electric reducing furnace operates with electrical energy that is fed into the furnace interior (Oi) via at least one electrode. The reducing furnace (1), while having an air-sealed design, comprises a **charging** opening (3) for **charge** stock, which is conveyed via a **charging** device (4), whereby the **charging** opening also simultaneously serves as a waste gas exhaust opening (3) for the resulting gas.

Inventors

KUNZE JUERGEN

Latest standardized assignees - inventors removed

SMS SIEMAG

Publication dates

2005-02-17

2005-03-10

2005-03-10

2005-03-10

2005-05-20

2006-04-24

2006-05-24

2006-09-06

2006-10-03

2006-10-03

2006-10-25

2007-06-29

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2007-12-20

2008-03-16

2009-03-27

2009-09-09

2010-05-20

2011-11-15

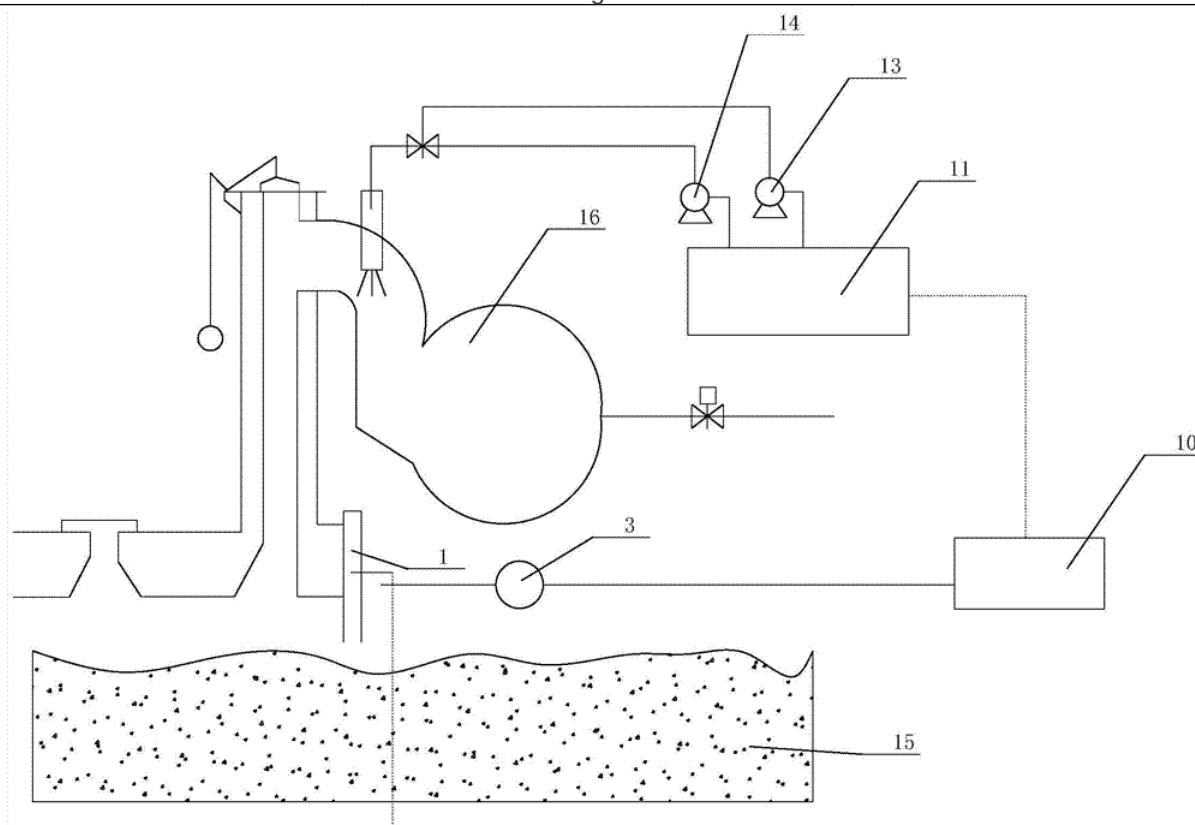
2015-04-22

Family 7/10 - FAMPAT - ©Questel

Title

(CN104962298)

Method and system for controlling internal suction-method smokeless coal **charging** process of tamping **coke** oven**Images**



Publication data including kind & date

CN104962298	A	2015-10-07	CN104962298
CN104962298	B	2018-05-08	CN104962298B



Abstract

(CN104962298B)

The invention relates to the technical field of recycling control over flue gas in tamping **coke** ovens, in particular to a method and a system for controlling an internal suction-method smokeless coal **charging** process of a tamping **coke** oven. The system structurally comprises a ground control station, a frequency converter of a high-pressure ammonia water pump, a pressure transmitter and a vehicle-mounted data acquisition and transmission device, wherein the frequency converter of the high-pressure ammonia water pump is connected with the ground control station through a signal cable; the pressure transmitter is arranged on an outlet pipeline of the high-pressure ammonia water pump; the vehicle-mounted data acquisition and transmission device is arranged on a coal **charging coke** pusher, is connected with the ground control station in a wireless manner and is used for sending an acquired coal **charging coke** pushing motion signal to the ground control station; the ground control station regulates the ammonia water output pressure of the high-pressure ammonia water pump through the frequency converter so as to control the spraying situation of an ammonia water spraying nozzle mounted on a bridge pipe, so that the furnace gate pressure of a coal **charging** carbonization chamber is in a micro-negative pressure state all the time. According to the method and the system, during the implementation of the internal suction-method smokeless coal **charging** process, coal **charging** flue gas can be totally recycled, the oxygen content of electric fishing coal gas is stably controlled, and the economic benefit and the environmental protection effect are extremely objective; meanwhile, the investment cost and the operation cost of a machine side ground dust removal station are greatly reduced.

Inventors

XU WENMING

ZHU GUANGDONG

Latest standardized assignees - inventors removed

JINAN HONGKEXINTAI ENVIRONMENTAL PROT TECHNOLOGY

Publication dates

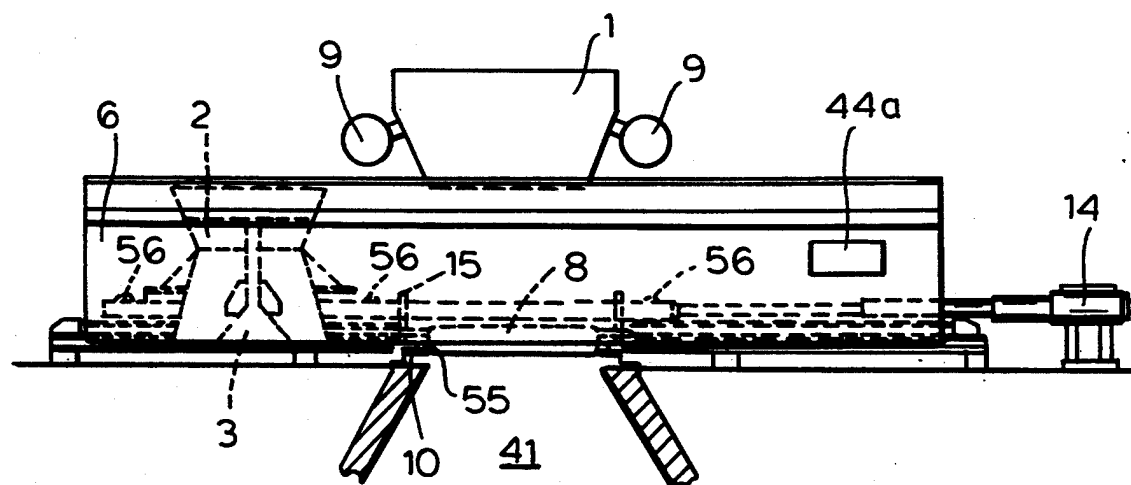
2015-10-07

2018-05-08

Family 8/10 - FAMPAT - ©Questel

Title

(EP-639213)

Coke feed device with housing for a **coke** dry cooling installation**Images****Publication data including kind & date**

CA2100867	A1	1992-07-25	CA2100867				
DE4102045	A1	1992-07-30	DE4102045				
WO9213043	A1	1992-08-06	WO9213043				
KR19920014917	A	1992-08-25	KR19920014917				
BR9200215	A	1992-10-06	BR9200215				
BRPI9200215	A1	1992-10-06	BRPI9200215				
JPH0559369	A	1993-03-09	JP05059369				
EP0639213	A4	1993-09-17	EP-639213				
TW230197	B	1994-09-11	TW-230197				
EP0639213	A1	1995-02-22	EP-639213				
KR950002343	B1	1995-03-16	KR950002343				
US5421963	A	1995-06-06	US5421963				
EP0639213	B1	1996-01-24	EP-639213				
JP2528229	B2	1996-08-28	JP2528229				
CA2100867	C	1998-06-30	CA2100867				
BRPI9200215	B1	1999-08-10	BR199200215				
DE4102045	C2	2000-10-05	DE4102045				

Abstract

(EP-639213)

Coke feed device with housing (6) for a **coke** dry cooling installation which is allocated to a cooling shaft (41) and consists of a stationary hopper (1) with an extraction line (9), a movable hopper (2), a movable, lifttable and lowerable cooling shaft closure (8) and the housing (6) containing the movable hopper (2) and the cooling shaft closure (8) which are arranged on a joint chassis (22) running on rails (49). The movable hopper (2, 200, 201) is fitted with a distribution bell (3, 4) and a lifttable and lowerable sealing ring (11) and the movable cooling shaft closure (8) fitted with a sealing ring (55) is integrated into a lifting and lowering device (15) and the housing (6, 600, 601) takes the form of a hood clear of the floor or with apertures in the walls (45, 450, 451, 46, 460, 461) for a limited secondary air supply.

Inventors

STEWEN WILHELM

OPDENWINKEL HEINZ

DUNKER NORBERT

YASUKOUCHI NAOTO

KISHIGAMI KAZUSHI

Latest standardized assignees - inventors removed

RUHRKOHL

NIPPON STEEL

Publication dates

1992-07-25

1992-07-30

1992-08-06

1992-08-25

1992-10-06

1992-10-06

1993-03-09

1993-09-17

1994-09-11

1995-02-22

1995-03-16

1995-06-06

1996-01-24

1996-08-28

1998-06-30

1999-08-10

2000-10-05

Family 9/10 - FAMPAT - ©Questel

Title

(KR101299822)

Cleaning apparatus of leveller **door** in **coke** oven

Images

Publication data including kind & date

[KR101299822](#)

B1 2013-09-10

KR101299822



Abstract

(KR101299822)

PURPOSE: An apparatus for cleaning a leveler **door** of a **coke** oven is provided to rapidly and accurately remove tar or carbon from a sealing strip and a radiating plate of the leveler **door**. CONSTITUTION: An apparatus for cleaning a leveler **door** of a **coke** oven comprises a moving frame (300), a reciprocating cylinder member (400), a brush member (500), and a cleaning member (600). The moving frame moves along a guide frame. The reciprocating cylinder member moves the moving frame toward the leveler **door**. The brush member removes tar or carbon stuck on a sealing strip or a radiating plate of the leveler **door**. The cleaning member sprays water to the sealing strip or the radiating plate of the leveler **door**.

Inventors

CHOI JUNG CHUL

KIM SUNG WOOK

Latest standardized assignees - inventors removed

POSCO

Publication dates

2013-09-10

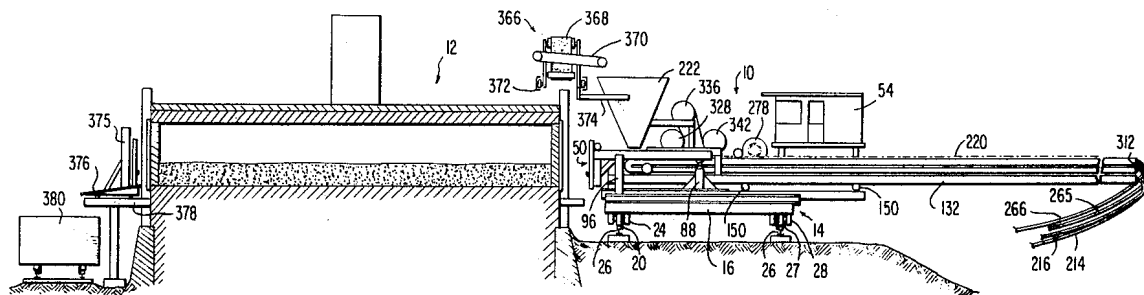
Family 10/10 - FAMPAT - ©Questel

Title

(US3784034)

Coke oven pushing and **charging** machine and method

Images



Publication data including kind & date

[US3784034](#)

A 1974-01-08 US3784034



Abstract

(US3784034)

A combined **coke** oven pushing and **charging** machine is supported on tracks for movement along the front of a bank of **coke** ovens and is operable to open an oven **door**, push the **coke** from the open oven, and close the oven **door**, and to open the **door** of an adjacent empty oven, **charge** the oven with a uniform, level, compact **charge** of coal, and close the **door**. The machine is then moved along the track a distance equal to the width of one oven, a second oven is pushed, and the oven previously pushed is **charged**. The pusher head is provided with roller supports adapted to roll along the oven floor during the pushing operation, and the head is water cooled to prevent warping and damage by the intense heat of the **coke**. The coal is deposited into the empty ovens by a drag-type endless chain conveyor having a width substantially equal to the width of the coking chambers and which is telescoped into the oven from the pusher **door** opening. The generally horizontal cantilevered conveyor simultaneously fills, levels, and compacts the coal in the coking chamber.

Inventors

THOMPSON B

Latest standardized assignees - inventors removed

ELK RIVER RESOURCES

Publication dates

1974-01-08