

Title (en)  
THICK-THIN COAL DUST SEPARATION AND ARRANGEMENT STRUCTURE FOR SINGLE-FIREBALL EIGHT-CORNER STRAIGHT-FLOW BURNER

Title (de)  
SEPARATORSTRUKTUR IN EINEM OKTAGONALEN EINZEL-FEUERKUGEL-DIREKTFLUSSBRENNER ZUR VERDICHUNG/VERDÜNNUNG VON PULVERFÖRMIGER KOHLE

Title (fr)  
SÉPARATION GROSSIER-FIN DE POUSSIER DE CHARBON ET STRUCTURE D'AGENCEMENT POUR BRÛLEUR À BOULE DE FEU UNIQUE, À FLUX DROIT OCTOGONAL

Publication  
**EP 2781833 A4 20150708 (EN)**

Application  
**EP 12824757 A 20120216**

Priority  
• CN 201110358273 A 20111114  
• CN 2012071222 W 20120216

Abstract (en)  
[origin: US2014038115A1] The invention discloses a dense/dilute pulverized coal separator structure of a single-fireball octagonal direct-flow burner, of which a boiler body is provided with eight burner groups, each water cooled wall is provided with two burner groups respectively, each of the burner groups comprises multiple nozzles toward the same burner, and center lines of all nozzles on the eight burner groups form an imaginary tangent circle in a furnace along the same tangential direction. In the dense/dilute pulverized coal separator structure, eight burner groups are arranged on four water cooled walls of the boiler, thus increasing pulverized coal concentration of a pulverized rich coal area, allowing wall heat load qHr of a lower burner area to be higher, allowing burning temperature of the area to meet requirements for anthracite burning stability, shortening distance of jet flow from a nozzle outlet to downstream adjacent air flow, being capable of using lower primary pulverized coal air flow velocity, enhancing heat flow intensity at the nozzle outlet, improving convection and radiation heat transfer capacity, and ensuring timely ignition of pulverized anthracite air flow and stable burning of the boiler at low load without oil.

IPC 8 full level  
**F23D 1/00** (2006.01); **F22B 21/34** (2006.01); **F23C 5/28** (2006.01); **F23C 5/32** (2006.01); **F23C 7/06** (2006.01); **F23K 1/00** (2006.01); **F23L 9/02** (2006.01)

CPC (source: EP US)  
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Citation (search report)  
• [Y] WO 2009152654 A1 20091223 - HARBIN INST OF TECHNOLOGY [CN]  
• [Y] CN 101737771 A 20100616 - SHANGHAI BOILER FACTORY CO LTD  
• [Y] CN 201582812 U 20100915 - UNIV TSINGHUA  
• See references of WO 2013071713A1

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Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**US 2014038115 A1 20140206**; CN 102563634 A 20120711; CN 102563634 B 20150218; EP 2781833 A1 20140924; EP 2781833 A4 20150708; PL 224267 B1 20161230; PL 404139 A1 20140217; WO 2013071713 A1 20130523; ZA 201301308 B 20140226

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**US 201213808121 A 20120216**; CN 201110358273 A 20111114; CN 2012071222 W 20120216; EP 12824757 A 20120216; PL 40413912 A 20120216; ZA 201301308 A 20130220