

Title (en)

Burner system for NOx-poor combustion of heavy oil.

Title (de)

Brennersystem zur NOx-armen Verbrennung von schwerem Heizöl.

Title (fr)

Système de brûleur pour une combustion pauvre en NOx de fuel lourd.

Publication

**EP 0314910 A2 19890510 (DE)**

Application

**EP 88115443 A 19880921**

Priority

DE 3737321 A 19871104

Abstract (en)

[origin: JPH01163512A] PURPOSE: To provide a combustion system which can completely burn heavy oil, by suppressing the occurrence of NOx by resupplying a flue gas to a burner after separating such coarse dust particles as the ashes, unburned matters, etc., from the gas by means of a separator connected to a flue-gas pipeline. CONSTITUTION: A flue-gas pipeline 19 is connected to the flue-gas outlet 7 of a flame-tube boiler, and a centrifugal separator 20 and a device 21 which removes dust, sulfur, and nitrogen are connected to the pipeline 19. A flue-gas blower 23 sucks up the flow of a mixture composed of a flue gas including unburned matters and relatively coarse dust particles from the solid output of a separator 20, and blows out the mixture from nozzle pipes 24 arranged on a circle in the wall body of a chamber 15. The flow of the mixture becomes revolving motions with respect to the axis of a burner. When the mixture is blown from the nozzle pipes 24, secondary fuel feed and secondary air feed are introduced to the flame tube 1 of the boiler through the openings 29 and 30 of a lance 28 protruded into the end section of the flame tube 1 on the opposite side of the burner and reduce the nitrogen oxides formed in flames.

Abstract (de)

Ein Flammrohrkessel ist mit einem Brennersystem zur NOx-armen Verbrennung von Schweröl versehen, das einen Luftkasten (8) aufweist, der über einen zentralen, eine Ölbrennerlanze (17) umschließenden Primärluftkanal (16) und über um den Primärluftkanal (16) angeordnete Sekundärluftzuführungen (18) mit dem gekühlten Flammrohr (1) des Flammrohrkessels verbunden ist. In der sich an den Rauchgasaustritt (7) anschließenden Rauchgasleitung (19) ist ein Abscheider (20) angeordnet, dessen Feststoffaustrag mit einem Kranz von Düsenrohren (24) verbunden ist, der innerhalb des Brenners angeordnet ist und in das Flammrohr (1) mündet.

IPC 1-7

**F23C 9/06**

IPC 8 full level

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CPC (source: EP US)

**F23C 9/06** (2013.01 - EP US); **F23C 2201/30** (2013.01 - EP US)

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