

Title (en)

Method and device for the combustion of granular solid fuel or liquid fuel on a granular solid carrier

Title (de)

Verfahren und Vorrichtung zur Verbrennung von körnigem Festbrennstoff oder flüssigem Brennstoff auf einem körnigen festen Träger

Title (fr)

Procédé et appareil pour la combustion de carburant solide granuleux ou de carburant liquide sur un support solide granuleux

Publication

EP 1143195 A1 20011010 (EN)

Application

EP 00201241 A 20000405

Priority

EP 00201241 A 20000405

Abstract (en)

The present invention concerns a method and a device for the combustion of granular solid fuel or of liquid fuel on a granular solid carrier. The granular solid fuel or the liquid fuel on a granular solid carrier are burnt in suspension in a vertical combustion device (1) comprising a combustion chamber (2) with a top (4) and a bottom (5) and a vertical peripheral wall (3) disposed around a longitudinal axis (31). A first opening (6) is provided in the top of the chamber (2) for removal of hot combustion products. The combustion device (1) comprises a fuel inlet device (17) for inputting through the peripheral wall (3) granular solid fuel or liquid fuel on a granular solid carrier. It furthermore comprises a first gas inlet device (25) for inputting a gas (9) to generate a first vortex flow (8) adjacent to the peripheral wall (3), and a second gas inlet device (15) for inputting a gas (11) to form a second vortex flow (10) within the first vortex flow (8). The second gas inlet device (15) is located at or adjacent the bottom (5) of the chamber. The second vortex flow (10) is directed upwards towards the first opening (6) in the top of the chamber (1). A second opening (7) is provided in the bottom (5) of the chamber for continuous removal of dense particles. Furthermore, a deflector (28) is provided, which co-operates with the second vortex flow (10) to propel the fuel upwards towards the first opening (6) and which allows dense particles to exit continuously from the second opening (7). <IMAGE>

IPC 1-7

F23C 3/00; **F23G 5/50**

IPC 8 full level

F23C 3/00 (2006.01); **F23G 5/50** (2006.01)

CPC (source: EP)

F23C 3/008 (2013.01); **F23G 5/50** (2013.01); **F23G 2203/30** (2013.01); **F23G 2207/104** (2013.01); **F23G 2207/30** (2013.01)

Citation (applicant)

- EP 0092622 A1 19831102 - YORK SHIPLEY INC [US]
- US 4351251 A 19820928 - BRASHEARS DAVID F
- WO 9214969 A1 19920903 - ATLAS IND AS [DK]

Citation (search report)

- [A] US 5024170 A 19910618 - SANTANAM CHANDRAN B [US], et al
- [A] US 4351251 A 19820928 - BRASHEARS DAVID F
- [A] US 5024684 A 19910618 - TANK JOHN T [US]

Cited by

EP2479493A1

Designated contracting state (EPC)

BE DE ES FR GB NL

DOCDB simple family (publication)

EP 1143195 A1 20011010; **EP 1143195 B1 20050309**; DE 60018552 D1 20050414

DOCDB simple family (application)

EP 00201241 A 20000405; DE 60018552 T 20000405