

Title (en)
A fluid-bed reactor.

Title (de)
Wirbelschicht-Reaktor.

Title (fr)
Réacteur à lit fluidisé.

Publication
EP 0243156 A1 19871028 (EN)

Application
EP 87303513 A 19870422

Priority
DK 186086 A 19860423

Abstract (en)
The combustion chamber (1) of the fluid-bed reactor is composed of an upper furnace chamber (3) and a reactor chamber (4) centrally located beneath the furnace chamber and whose cross-sectional area is considerably smaller than the cross-sectional area of the furnace chamber, preferably not exceeding one third thereof. Around the reactor chamber and adjacent thereto one or more vertical ducts (5) are located which are open at their top towards the superposed furnace chamber and at the bottom include blockable discharge openings to the bottom of the reactor chamber. Reactor heat surfaces (26) are inserted in the ducts (5) and may include a final superheater for the steam generated in the reactor. During operation of the reactor the mixture of inert vortex layer material and combustible in the reactor chamber is kept fluidized to such a degree that material from the chamber is continuously blown up into the furnace chamber together with the flue gases. Due to the sudden increase of the cross-section above the chamber the gas rate decreases correspondingly, and the major portion of the entrained material drops down into the ducts where it is cooled by the incorporated heat surfaces and subsequently recycled to the reactor chamber. The effected internal recycling of the hot vortex layer material provides inter alia for arranging convection heat surfaces (17) between the furnace chamber and a succeeding cyclone separator (19) which may thus be more simply structured, made less expensive and provided with a higher efficiency than prior reactors with external recycling.

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F23C 11/02; **F22B 31/00**

IPC 8 full level
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CPC (source: EP KR)
F22B 31/0092 (2013.01 - EP); **F23C 10/02** (2013.01 - EP KR); **F23C 10/04** (2013.01 - KR)

Citation (search report)
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• [A] DE 2753173 A1 19780622 - CHAMBERT LARS AXEL ANDREAS M S
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EP 0243156 A1 19871028; BR 8701911 A 19880202; DD 256081 A5 19880427; DK 186086 A 19871024; DK 186086 D0 19860423; FI 871698 A0 19870416; FI 871698 A 19871024; JP S62258912 A 19871111; KR 870010356 A 19871130; NO 871667 D0 19870422; NO 871667 L 19871026

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