

Title (en)  
COMPOSITE CIRCULATION FLUIDIZED BED BOILER.

Title (de)  
WIRBELBETTOFEN MIT VERBUNDUMLAUF.

Title (fr)  
CHAUDIERE A LIT FLUIDISE A CIRCULATION COMPOSITE.

Publication  
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Application  
**EP 89909857 A 19890830**

Priority  
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Abstract (en)  
[origin: EP0431163A1] This invention relates to a composite circulation fluidized bed boiler. A fluidized bed portion of the fluidized bed boiler is divided by a partition into a main combustion chamber and a heat recovery chamber, and at least two kinds of air chambers, i.e. an air chamber for providing a large fluidizing speed to a fluidization medium and an air chamber for providing a small fluidizing speed are provided. The combination of air having different fluidization speeds and jetted from these air chambers generates a swirling circulation flow in the fluidization medium inside the main combustion chamber and a circulation flow of the fluidization medium is generated between the main combustion chamber and the heat recovery chamber. Inside the heat recovery chamber, heat recovery of an exhaust gas is made at a free board portion or downstream of the free board portion in an internal circulation fluidized bed boiler for lowering the fluidization medium in the form of the fluidized bed, and after the temperature of the exhaust gas is lowered, the exhaust gas thus cooled is led into a cyclone and the char in a fine particle form collected by the cyclone is returned to the portion immediately above, or into, the lowering moving layer of the fluidization medium in the main combustion chamber and/or the heat recovery chamber. Since the char is returned immediately above or into the lowering moving layer of the fluidization medium, it does not immediately scatter to the free board portion. Accordingly, though it is the fine particles, it sediments and diffuses sufficiently into the fluidized bed so that NOx generated by the combustion of coal or the like inside the layer can be reduced.

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