

Title (en)  
CIRCULATING BED REACTOR

Title (de)  
REAKTOR MIT ZIRKULIERENDER SCHICHT

Title (fr)  
REACTEUR A LIT CIRCULANT

Publication  
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Application  
**EP 04767133 A 20041021**

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Abstract (en)  
[origin: WO2005037422A1] A circulating fluidized bed reactor comprising a riser channel having a separation unit (5 - 9), arranged at its upper part, for separating solid matter from fluidizing gas. The separation unit consists of a multi-inlet cyclone, which comprises a set of control vanes (5) for directing the gas against the wall of a separation chamber to pre-separate the solid matter and to provide a rotating flow, a separation chamber (6) to separate any particles that remain in the gas after the pre-separation by means of a centrifugal force, a discharge assembly (7) to remove the gas and solid matter of the recycling channel (9), which is connected to the separation chamber, from the cyclone chamber (6). According to the invention, the set of control vanes (5), the return channel (9) and the gas discharge assembly (7) of the multi-inlet cyclone are arranged symmetrically around the riser channel (4), and the cyclone chamber (6) and the discharge assembly (7) are placed coaxially above the set of control vanes (5). The invention provides a symmetrical structure, wherein any stresses caused by horizontal thermal expansion are minimized and wherein the riser channel is allowed to freely expand in the vertical direction differently from the jacket.

IPC 1-7  
**B01J 8/18; B01J 8/38**

IPC 8 full level  
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