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BASF AG

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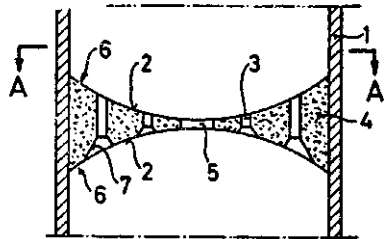
Multistage coal paste hydrogenation reactor - with specified perforations in intermediate plates between stages

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EMBODIMENT

Each intermediate plate (1) consists of two curved shells (2) which are joined to each other through perforations (3) with a tapered inflow (7). Gas and coal paste rise through them from one stage to the next. The space between the shells is filled with a ceramic compound (4); asbestos cement has been found to be very suitable. A large number of small holes (6) ensures a pressure equalisation. A manhole (5) can be added to facilitate the access. (13pp39).

(G)ISR:- No Search Report.



D/S: E(AT BE CH DE FR GB IT LI NL)

A multi-stage reactor for the hydrogenation of a coal slurry in a pressure vessel at pressures of up to 750 (pref. up to 350) bars has inlets for gas and coal slurry in the bottom, an outlet for waste sludge, gas and vapours in the top, and several horizontal intermediate plates, separating the reaction stages from each other. These intermediate plates have perforations with cross-sectional areas which taper in the direction of flow. The total area of the perforations is 1-15 (pref. 1-5)% of the total reactor cross-section.

ADVANTAGES

The design ensures uniform distribution of gas and liquid over the cross-section from one stage to the next and prevents the accumulation of a gas cushion leading to incrustations.

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