

86-132396/21

E36 H09

SHELL INT RES MIJ BV

15.11.84-NL-003493 (15.05.86) C01b-03/02 C10j-03/20

Synthesis gas reactor - with water distributor ring producing water layer running down inner reactor walls

C86-056704

SHEL 15.11.84

*DE 3540-304-A

E(31-A1) H(9-C)

A reactor for the production of synthesis gas by the partial combustion of a pulverized fuel has in the upper part a water distribution system. This causes a water layer to run down at least a part of the inner walls of the reactor.

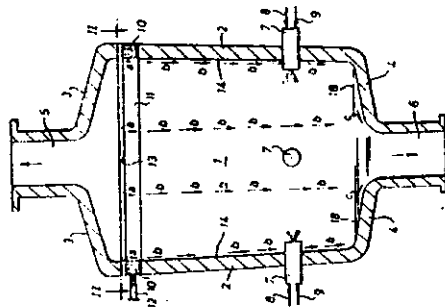
ADVANTAGES

This absorbs the fine ash particles which tend to stick to the inside walls and prevents any encrustation.

EMBODIMENT

The reactor (1) for synthesis gas is fitted with a set of burners (7) which receive pulverized coal through the pipes (8) and oxygen or air through the pipe (9). A peripheral tray (10) receives water from the supply line (12). An overflow over the rim (13) of the inner vertical wall (11) causes a layer of water to run down the inner walls (14) as indicated by the arrows.

The water is extracted with the ash through the discharge (6). Some water evaporates and takes part in the gasification reaction. It leaves together with the synthesis gas through the outlet (5). The water effects a good cooling of the reactor walls. (13pp39GTDwgNo1/4).



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