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 MAN MASCH AUGSBURG-NURNB *DE 3223-702-A
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Synthesis gas reactor - using recycled side stream of production gas after h.t. conversion and reheating

H(9-C) M(24-A3)

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and filter (15), followed by a high-temperature conversion (17) where water is added.

From a heat exchanger (8), coupled to a steam generator (30), the synthesis gas leaves after quenching (19) and scrubbing (22). A side stream is extracted from the line (10), compressed, reheated in the heat exchanger (11) and recycled to the reactor (9). (20pp39DwgNo1/2)

C84-002560

In a reactor operated to produce synthesis gas, a part of the waste heat of the gas produced is recycled after the gas has been processed. The reactor gas is freed from fly ash, cooled and passed through a high-temperature convertor. A side stream is compressed, heated, washed and returned to the reactor together with primary air and carbon containing fuel.

ADVANTAGES

The reactor has improved efficiency and can be used even for pulverised coal. It can be used for the direct reduction of iron ore to iron sponge.

EMBODIMENT

Preheated oxygen (7) and pulverised coal (8) of 0.5 mm are charged to the reactor (9), together with recycled gas from pipe (6). The reaction gases leave through pipe (5) for a heat exchanger and fly ash separator (11), a cyclone (14)

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