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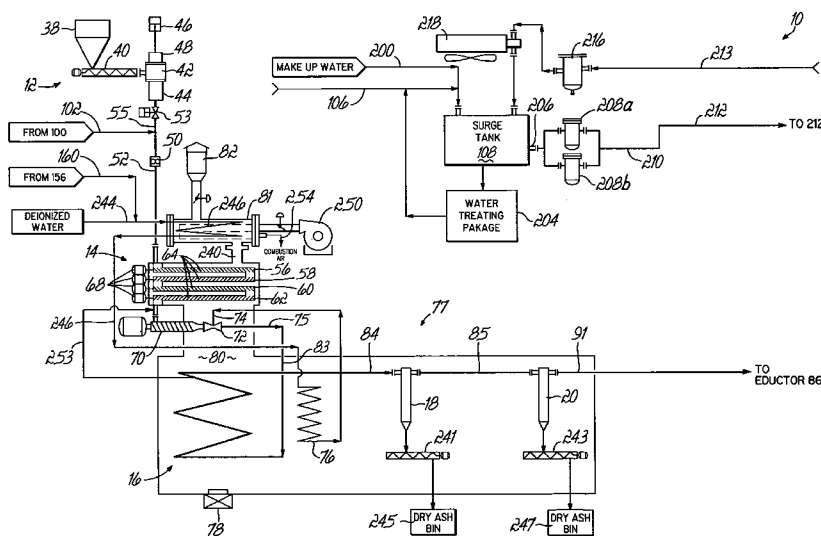
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(54) Title: METHOD AND APPARATUS FOR PRODUCING SYNTHESIS GAS FROM WASTE MATERIALS



(57) Abstract: An apparatus (10) designed to form syn gas from carbonaceous materials such as coal includes a devolatilization reactor (14) in combination with a reformer reactor (16) which subsequently forms syn gas. The reformer reactor, in turn, is in communication with a particulate separator (18). The devolatilization reactor is fed with material using a compression feeder (12) which drives air from the feed material, compresses it in a feed zone forming a seal between the feed hopper and the devolatilization reactor. The reformer reactor (16), as well as the particulate separators (18,20), are maintained in a heated furnace (77) so that the temperature of the formed syn gas does not decrease below the reaction temperature until particulate material has been separated.