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(54) **Title:** A SYSTEM AND A METHOD FOR PRODUCING CATALYTICALLY TREATED PYROLYTIC VAPOR

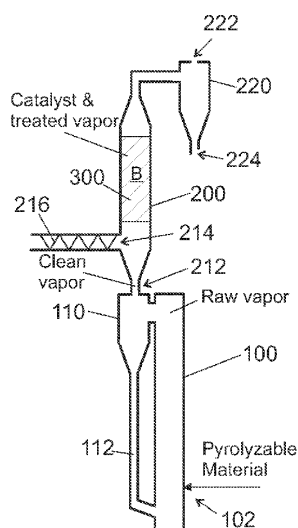


Fig. 1a

(57) **Abstract:** A system for producing catalytically treated pyrolytic vapor. The system comprises a pyrolysis reactor (100) configured to produce pyrolytic vapor and a catalytic reactor (200) limiting a bed area (B) into which a fluidized catalyst bed is configured to form in use. The catalytic reactor (200) comprises a static mixer (300) configured to spread the particulate catalyst within the bed area (B). Thus, the catalytic reactor (200) is configured to produce a mixture of the particulate catalyst and the catalytically treated pyrolytic vapor from the pyrolytic vapor. A method for producing catalytically treated pyrolytic vapor. The method comprises producing pyrolytic vapor and allowing at least a clean part of the pyrolytic vapor to chemically react in the presence of the particulate catalyst to produce a mixture of the particulate catalyst and catalytically treated pyrolytic vapor. The method comprises mixing, in the bed area, the pyrolytic vapor and the particulate catalyst with a static mixer.

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