

Title (en)

METHOD AND EQUIPMENT FOR PYROLYTIC CONVERSION OF COMBUSTIBLE MATERIAL

Title (de)

VERFAHREN UND VORRICHTUNG ZUR PYROLYTISCHEN UMWANDLUNG VON BRENNBAREM MATERIAL

Title (fr)

PROCÉDÉ ET ÉQUIPEMENT DE CONVERSION PYROLYTIQUE DE MATÉRIAU COMBUSTIBLE

Publication

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Application

EP 08757906 A 20080512

Priority

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Abstract (en)

[origin: WO2009021471A2] Combustible material is supplied to the reaction zone, continuously or in pulses, which the reaction zone is separated from the surrounding atmosphere, and combustible material gradually moves through the reaction zone to the reaction zone outlet, in the same direction as released gases leave the combustible material. The reaction zone is heated to the temperature, the value of which is increasing in the direction to the reaction zone outlet, however, to 12000C as a maximum. Then, released gases are draught off separately from non-gasified residue. As an advantage, steam and/or water is supplied to combustible material and the combustible material previously charged into the reaction zone moves by acting of subsequently supplied combustible material, where the combustible material is being compressed. The equipment for pyrolytic conversion comprises one filling device (1), reactor (2) comprising the reaction zone (5), at least one heater (3, 13), and hopper (4) for non- gasified residue (8). The reactor (2) has an elongated shape and its longitudinal axis is deviated from the vertical direction by 45° as a maximum, where the filling device (1) is located in the lowest part of the reactor (2) and inlet of hopper (4) for non- gasified residue (8) is located in the upper part of the reactor (2). The reactor (2) comprises reaction zone (5), which is in contact with at least one heater (3, 13). The hopper (4) for non-gasified residue (8) is connected to the reactor (2) above the reaction zone (5). The horizontal cross-section of the reaction zone (5) in upwards direction is narrowing in at least one part, and advantageously at least one inlet piping (6) is led into the reaction zone (5) as a steam and/or water supply. As an advantage, at least one column (9) is located inside the reactor (2), in its elongated direction. Heaters (3,13) are electric heating spirals and/or burners. The filling device (1) includes at least one piston (10) advantageously has a piston (10) annular-shaped base, in the centre of which at least one column (9) or worm is located. Advantageously the worm is whipped around the column (9). The filling hole (14) of reactor (2) is advantageously provided with a rib (15).

IPC 8 full level

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