

Title (en)

REACTOR AND PROCESS FOR GASIFYING AND/OR MELTING OF FEED MATERIALS

Title (de)

REAKTOR UND VERFAHREN ZUM VERGASEN UND/ODER SCHMELZEN VON EINSATZSTOFFEN

Title (fr)

RÉACTEUR ET PROCÉDÉ DE GAZÉIFICATION ET/OU DE FUSION DE MATÉRIAUX D'ALIMENTATION

Publication

**EP 3660132 A1 20200603 (EN)**

Application

**EP 18208810 A 20181128**

Priority

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Abstract (en)

The present invention relates to a reactor (100) for the gasifying and/or melting of feed materials. The reactor comprises: a co-current section (110), comprising a plenum zone (111), comprising a feed zone with a sluice (112), wherein feed materials are introduced into the reactor (100) from above via the feed zone, a buffer zone (113), a pyrolysis zone (114), which adjoins a bottom of the buffer zone (113) to create a cross-sectional enlargement, and an intermediate zone (115) adjoining the pyrolysis zone, an upper oxidation zone (116) adjoining a bottom of the intermediate zone and comprising tuyeres (117) in at least one plane, and an upper reduction zone (118) adjoining a bottom of the upper oxidation zone (116), a gas outlet section (120) comprising at least one gas outlet (121), and a countercurrent section (130) comprising a conical lower reduction zone (138) adjoining the gas outlet section (120) and a conical lower oxidation zone (136) adjoining the lower reduction zone (138) comprising at least one tuyere (137) and at least one tapping (131).

IPC 8 full level

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Citation (applicant)

EP 1261827 B1 20051116 - MASCH UND STAHLBAU GMBH [DE]

Citation (search report)

- [X] WO 0246331 A1 20020613 - EMERY RECYCLING CORP [US], et al
- [A] WO 0162873 A1 20010830 - MITTELDEUTSCHE FEUERUNGS UND U [DE], et al
- [A] DE 19640497 A1 19980409 - FEUSTEL HANS ULRICH DIPL ING [DE], et al

Cited by

EP4026885A1

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