

## Title (en)

PROCESS AND PLANT FOR TRANSFORMING COMBUSTIBLE MATERIALS IN CLEAN GAS WITHOUT TARS

## Title (de)

VERFAHREN UND EINRICHTUNG ZUR TRANSFORMIERUNG VON BRENNBAREN MATERIALIEN IN GEREINIGTEN GAS OHNE TEERE

## Title (fr)

PROCEDE ET INSTALLATION POUR LA TRANSFORMATION DE MATÉRIAUX COMBUSTIBLES DANS DES GAZ PURIFIÉS SANS GOUDRONS

## Publication

**EP 3219777 A1 20170920 (EN)**

## Application

**EP 16202784 A 20161207**

## Priority

- IT UB20156873 A 20151209
- CH 17962015 A 20151209

## Abstract (en)

Plant for transforming of combustible materials in tar-free clean gas, said plant comprising: - a pyrolysis reactor (20) suitable for being supplied on one inlet (40) by means of said combustible materials, said pyrolysis reactor (20) being at least partially installed in a first chamber (30) thermally insulated and being touched in use by gases of combustion of pyrolysis gases produced by said pyrolysis reactor (20), and wherein said pyrolysis reactor (20) outgoing produces char ; - a flow generation chamber (140) underlying said first chamber (30) thermally insulated and communicating with it, wherein said flow generation chamber (140) has inlet nozzles (220) supplied with pyrolysis gases produced by said pyrolysis reactor (20); - an anoxic decarburization unit (100) having first inlet means (80) supplied with said outbound char produced by said pyrolysis reactor (20) and having second inlet means, directly connected with said flow generation chamber (140); wherein in said flow generation chamber (140) takes place a stoichiometric or overstoichiometric combustion of part of said pyrolysis gases in a burner (210), wherein the resting part of said pyrolysis gases supplied with said inlet nozzles (220) is then blended with the products of said combustion thus obtaining a hot flow totally oxygen-free and wherein are completely burned the tars contained in said pyrolysis gases. The invention comprises furthermore the associated proceeding.

## IPC 8 full level

**C10J 3/30** (2006.01); **C10J 3/00** (2006.01); **C10J 3/66** (2006.01)

## CPC (source: EP)

**C10J 3/30** (2013.01); **C10J 3/66** (2013.01); **F23G 5/20** (2013.01); **F23G 2201/30** (2013.01)

## Citation (applicant)

- EP 0976806 A1 20000202 - THERMOSELECT AG [LI]
- CH 697942 B1 20090331 - SOLENIA S A [CH]
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- WO 9521903 A1 19950817 - ENTEC RECYCLING UND INDUSTRIEIA [DE], et al
- WO 2015049659 A1 20150409 - ENI SPA [IT]
- WO 2015084193 A1 20150611 - GET ENERGY PRIME ITALY SRL [IT], et al
- US 4881947 A 19891121 - PARKER THOMAS H [US], et al

## Citation (search report)

- [XII] WO 2015049659 A1 20150409 - ENI SPA [IT]
- [XII] WO 2015084193 A1 20150611 - GET ENERGY PRIME ITALY SRL [IT], et al
- [A] EP 1122296 A2 20010808 - CHUGOKU MAINTENANCE CO LTD [JP]
- [A] US 4881947 A 19891121 - PARKER THOMAS H [US], et al

## Cited by

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## Designated contracting state (EPC)

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## Designated extension state (EPC)

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