

Title (en)
THIN-LAYER TREATMENT DEVICE

Title (de)
DÜNNSCHICHTBEHANDLUNGSVORRICHTUNG

Title (fr)
DISPOSITIF DE TRAITEMENT DES COUCHES MINCES

Publication
EP 3983102 A1 20220420 (DE)

Application
EP 20731131 A 20200612

Priority

- EP 19179678 A 20190612
- EP 2020066249 W 20200612

Abstract (en)
[origin: WO2020249705A1] The present invention relates to a thin-layer treatment device for treating viscous material. The thin-layer treatment device according to the invention comprises: a process housing (12) inclined to the horizontal by a maximum of 20° and having a heatable and/or coolable housing cover (14) that encloses a housing interior (16) forming a material treatment chamber (160); an inlet port (20) arranged in an inlet zone (18) of the process housing (12) for introducing the material to be treated into the material treatment chamber (160); an outlet port (24) arranged in an outlet zone (22) of the process housing (12) for removing the treated material from the material treatment chamber (160); and a drivable rotor shaft (44) arranged in the material treatment chamber (160) and extending coaxially for creating a material film on the housing cover inner surface (15) and for feeding the material in the direction towards an outlet zone (22). According to the invention, the rotor shaft (44) comprises at least one buoyancy element (56) which is arranged on the rotor shaft body (50) and is designed to create a buoyant force in the direction towards the rotor shaft body (50) during the rotation of the rotor shaft (44).

IPC 8 full level
B01D 1/00 (2006.01); **B01D 1/22** (2006.01)

CPC (source: CN EP KR US)
B01D 1/0082 (2013.01 - EP KR US); **B01D 1/22** (2013.01 - CN); **B01D 1/225** (2013.01 - EP KR); **B01D 1/226** (2013.01 - EP KR US);
B01D 1/228 (2013.01 - EP KR US); **B01J 19/1887** (2013.01 - KR); **D01D 1/02** (2013.01 - KR US); **D10B 2201/22** (2013.01 - US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2020249705 A1 20201217; BR 112021024627 A2 20220118; CA 3150399 A1 20201217; CN 112080807 A 20201215;
CN 112080807 B 20220930; CN 114025858 A 20220208; CN 114025858 B 20231027; EP 3983102 A1 20220420; EP 4079385 A1 20221026;
FI 20195926 A1 20201213; JP 2022536742 A 20220818; KR 102572738 B1 20230829; KR 20200143208 A 20201223;
KR 20220027150 A 20220307; TR 201919334 A2 20201221; TW 202112828 A 20210401; TW I793397 B 20230221;
US 2022161153 A1 20220526; US 2024189736 A1 20240613; ZA 202109736 B 20230125

DOCDB simple family (application)
EP 2020066249 W 20200612; BR 112021024627 A 20200612; CA 3150399 A 20200612; CN 202010078813 A 20200203;
CN 202080046364 A 20200612; EP 20731131 A 20200612; EP 22178959 A 20200612; FI 20195926 A 20191029; JP 2021573746 A 20200612;
KR 20190150501 A 20191121; KR 20227000828 A 20200612; TR 201919334 A 20191205; TW 109103092 A 20200131;
US 202017596390 A 20200612; US 202418440704 A 20240213; ZA 202109736 A 20211129