

Title (en)
FLUIDIZED BED EVAPORATION DRIER

Title (de)
WIRBELSCHICHTVERDAMPFUNGSTROCKNER

Title (fr)
DISPOSITIF DE SÉCHAGE PAR VAPORISATION DU LIT FLUIDISÉ

Publication
EP 3486591 B1 20200617 (DE)

Application
EP 18214410 A 20150309

Priority
• DE 102014106122 A 20140430
• EP 15710008 A 20150309
• IB 2015051707 W 20150309

Abstract (en)
[origin: WO2015166358A1] The present invention relates to an apparatus (1000) for removing fluids and/or solids from a mixture of particulate materials, having a container (21) which forms a ring-shaped process chamber (23) with a multiplicity of cells separated from one another by walls (25), said cells comprising an inlet cell (201), intermediate cells and an outlet cell (202), having an introduction device (1) for the introduction of the mixture for treatment into the inlet cell (201) of the process chamber (23), having a discharge device (3) for the discharge of the treated mixture out of the outlet cell (202) of the process chamber (23), having a fan device (7, 7') for feeding a first fluidization medium, in particular in the form of superheated steam, into the process chamber (23) from below through an inflow base (24, 24', 24'', 24''') in order to generate a fluidized bed (2) in the process chamber (23), having a heating device (6) for the preparation of the first fluidization medium upstream of the fan device (7, 7') as viewed in the flow direction, swirl blades (29) for conditioning the flow (110-160) in the container (21) from the process chamber (23) to the heating device (6) and, in part, to a vapour outlet (5), and having a dust extraction device (4) in the flow path between the process chamber (23) and the heating device (6), wherein, by way of the dust extraction device (4), dust can be conducted to the outlet cell (202), and to assist transportation of the mixture from the inlet cell (201) to the outlet cell (202) and/or a swirling of the mixture in the process chamber (23), the inflow base (24) has first unevennesses (342), and/or a second fluidization medium, in particular in the form of superheated steam, can at least intermittently be fed at least into the inlet cell (201) substantially parallel to the inflow base (24) by means of first nozzles (302), and/or first flow-guiding elements (303) are provided above the inflow base (24) and/or second flow-guiding elements (501, 502, 503, 600, 700) are provided below the inflow base (24', 24'', 24''').

IPC 8 full level
F26B 17/10 (2006.01); **F26B 25/00** (2006.01)

CPC (source: EP RU US)
F26B 17/10 (2013.01 - EP RU US); **F26B 17/103** (2013.01 - EP US); **F26B 17/107** (2013.01 - EP US); **F26B 25/007** (2013.01 - EP US); **F26B 25/02** (2013.01 - RU)

Citation (opposition)
Opponent : EnerDry ApS
• EP 3009776 A1 20160420 - ASJ IPR APS [DK]
• DE 102014106122 A1 20151105 - BMA BRAUNSCHWEIGISCHE MASCHB ANSTALT AG [DE]

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

DOCDB simple family (publication)
DE 102014106122 A1 20151105; DK 3137832 T3 20191118; DK 3486591 T3 20200831; EP 3137832 A1 20170308; EP 3137832 B1 20190814; EP 3486591 A1 20190522; EP 3486591 B1 20200617; PL 3137832 T3 20200430; RU 2016146789 A 20180530; RU 2016146789 A3 20180530; RU 2673041 C2 20181121; UA 120365 C2 20191125; US 10330385 B2 20190625; US 2017045293 A1 20170216; WO 2015166358 A1 20151105

DOCDB simple family (application)
DE 102014106122 A 20140430; DK 15710008 T 20150309; DK 18214410 T 20150309; EP 15710008 A 20150309; EP 18214410 A 20150309; IB 2015051707 W 20150309; PL 15710008 T 20150309; RU 2016146789 A 20150309; UA A201612045 A 20150309; US 201515307716 A 20150309