

Title (en)
TUBE SHEET

Title (de)
ROHRBODEN

Title (fr)
FOND À TUBES

Publication
EP 3042140 B1 20190821 (DE)

Application
EP 14753098 A 20140821

Priority
• DE 102013217689 A 20130904
• EP 2014067844 W 20140821

Abstract (en)
[origin: WO2015032628A1] The invention relates to a tube sheet (1, 20, 30) having a circumferential edge region (2, 22) for connection to a lid of a collecting tank and having a base region (31) with openings (3) for receiving tube ends, the base region (31) having webs (4, 21, 33) provided between adjacent openings (3), the webs (4, 21, 33) connecting the portions of the edge regions (2, 22) situated on the opposite longitudinal sides, at least one bead (5, 27) being provided which extends along the edge region (2, 22) and/or from the edge region (2, 22) with a limited extension only into a portion of a web (4, 33).

IPC 8 full level
F28F 9/02 (2006.01)

CPC (source: EP US)
F28F 1/00 (2013.01 - US); **F28F 9/0226** (2013.01 - EP US); **F28F 9/0229** (2013.01 - US); **F28F 9/182** (2013.01 - US);
F28F 2225/08 (2013.01 - EP US)

Citation (examination)
DE 102006005421 A1 20060810 - BEHR GMBH & CO KG [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 102013217689 A1 20150305; CN 105637315 A 20160601; CN 105637315 B 20171212; EP 3042140 A1 20160713;
EP 3042140 B1 20190821; US 10094627 B2 20181009; US 2016187077 A1 20160630; WO 2015032628 A1 20150312

DOCDB simple family (application)
DE 102013217689 A 20130904; CN 201480048811 A 20140821; EP 14753098 A 20140821; EP 2014067844 W 20140821;
US 201615061422 A 20160304