

Title (en)

Drain vent for petrochemical/chemical fluid pumping device and method of making the same

Title (de)

Abflussentlüftung für petrochemische/chemische Flüssigkeitspumpvorrichtungen und Herstellungsverfahren dafür

Title (fr)

Évent de drain pour dispositif de pompage de fluide chimique/pétrochimique et son procédé de fabrication

Publication

**EP 2711550 A2 20140326 (EN)**

Application

**EP 13185843 A 20130924**

Priority

US 201261705410 P 20120925

Abstract (en)

A fluid pumping device 10 for use in the petroleum and/or chemical industries includes a cast fluid housing 11 having an inlet 13 to or an outlet 13 from the fluid pumping device, a drain/vent tubular connection 12 extending through the cast fluid housing to communicate with the inlet to or the outlet of the fluid pumping device and a flange adapter 20 sealingly secured to the cast fluid housing 11. A method of providing a drain/vent tube 12 to structurally communicate with an inlet 13 to or the outlet 13 from a fluid pumping device is disclosed.

IPC 8 full level

**F04B 53/16** (2006.01); **F04B 53/04** (2006.01); **F04B 53/06** (2006.01); **F04B 53/22** (2006.01)

CPC (source: EP KR US)

**F01B 31/18** (2013.01 - US); **F04B 53/04** (2013.01 - EP US); **F04B 53/06** (2013.01 - EP US); **F04B 53/16** (2013.01 - EP US);  
**F04B 53/22** (2013.01 - EP US); **F04D 13/00** (2013.01 - KR); **F04D 29/00** (2013.01 - KR); **Y10T 29/49238** (2015.01 - EP US)

Cited by

CN104675694A; EP2716953A2

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)

**EP 2711550 A2 20140326**; **EP 2711550 A3 20150225**; **EP 2711550 B1 20180718**; CA 2828322 A1 20140325; CA 2828322 C 20191203;  
JP 2014074494 A 20140424; JP 2018185051 A 20181122; KR 20140040057 A 20140402; SG 2013072301 A 20140428;  
US 2014086768 A1 20140327

DOCDB simple family (application)

**EP 13185843 A 20130924**; CA 2828322 A 20130924; JP 2013196668 A 20130924; JP 2018153525 A 20180817; KR 20130113645 A 20130925;  
SG 2013072301 A 20130925; US 201314035485 A 20130924