

Title (en)

MULTIPHASE PUMP WITH SEPARATOR, WHEREIN THE PROCESS FLUID LUBRICATES AND COOLS THE PUMP

Title (de)

MEHRPHASENPUMPE MIT ABSCHIEDER, WOBEI DAS PROZESSFLUID DIE PUMPE SCHMIERT UND KÜHLT

Title (fr)

POMPE POLYPHASIQUE AVEC SÉPARATEUR, AVEC LUBRIFICATION ET REFROIDISSEMENT DE LA POMPE PAR LE LIQUIDE DE TRAITEMENT

Publication

**EP 2935894 A1 20151028 (DE)**

Application

**EP 13795801 A 20131128**

Priority

- EP 12198498 A 20121220
- EP 2013074954 W 20131128
- EP 13795801 A 20131128

Abstract (en)

[origin: WO2014095291A1] The invention relates to product-lubricated multiphase pump (2, 110, 116) for pumping a hydrocarbon-containing multiphase mixture. In order to achieve good cooling and lubrication of pump elements without a lot of operating fluid and operating fluid circuits, the multiphase pump (2, 110, 116) has a separation system (40) having a first separating stage (42) for at least partial separation of at least a part of the multiphase mixture into a plurality of phase-enriched components, and a feed system (66) for feeding a fluid-enriched fluid component as a lubricant to a pump element to be lubricated.

IPC 8 full level

**F04D 13/08** (2006.01); **E21B 43/12** (2006.01); **F04D 13/06** (2006.01); **F04D 29/06** (2006.01); **F04D 29/58** (2006.01); **F04D 31/00** (2006.01)

CPC (source: EP US)

**B01D 19/0052** (2013.01 - US); **B01D 21/26** (2013.01 - US); **B01D 21/262** (2013.01 - US); **B01D 21/265** (2013.01 - US); **B01D 29/00** (2013.01 - US); **B04B 5/10** (2013.01 - US); **E21B 43/128** (2013.01 - EP US); **E21B 43/38** (2013.01 - EP US); **F04D 1/00** (2013.01 - US); **F04D 9/003** (2013.01 - EP US); **F04D 13/0606** (2013.01 - EP US); **F04D 13/086** (2013.01 - EP US); **F04D 17/08** (2013.01 - US); **F04D 29/06** (2013.01 - US); **F04D 29/061** (2013.01 - EP US); **F04D 29/588** (2013.01 - EP US); **F04D 29/708** (2013.01 - EP); **F04D 31/00** (2013.01 - EP US)

Citation (search report)

See references of WO 2014095291A1

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 2014095291 A1 20140626**; BR 112015011075 A2 20170711; BR 112015011075 B1 20210420; CN 105164423 A 20151216; CN 105164423 B 20180119; EP 2935894 A1 20151028; US 10066635 B2 20180904; US 10890193 B2 20210112; US 2015308444 A1 20151029; US 2018231013 A1 20180816

DOCDB simple family (application)

**EP 2013074954 W 20131128**; BR 112015011075 A 20131128; CN 201380067546 A 20131128; EP 13795801 A 20131128; US 201314650150 A 20131128; US 201815954058 A 20180416