

Title (en)
CENTRIFUGAL PUMP STAGE, CENTRIFUGAL PUMP AND USE OF A PUMP

Title (de)
KREISELPUMPENSTUFE, KREISELPUMPE SOWIE VERWENDUNG EINER PUMPE

Title (fr)
ÉTAGE DE POMPE CENTRIFUGE, POMPE CENTRIFUGE ET UTILISATION D'UNE POMPE

Publication
EP 3123031 B1 20181212 (EN)

Application
EP 14721501 A 20140324

Priority
IB 2014060106 W 20140324

Abstract (en)
[origin: WO2015145196A1] The pump stage for a centrifugal pump comprises an impeller unit (10) having an axial hub and a diffuser unit (20) extended at a first face of said impeller unit (10). The impeller unit (10) is supported floating inside the diffuser unit (20). A shim ring (40) is associated with the impeller unit (10) and is sustained in sliding support on a washer (27) housed in a fixed position in a correspondent seat (26) of the diffuser unit (20) of an adjacent pump stage.

IPC 8 full level
F04D 1/06 (2006.01); **F04D 7/04** (2006.01); **F04D 13/08** (2006.01); **F04D 29/041** (2006.01); **F04D 29/16** (2006.01); **F04D 29/22** (2006.01)

CPC (source: EP RU US)
F04D 1/06 (2013.01 - RU US); **F04D 1/063** (2013.01 - EP US); **F04D 7/04** (2013.01 - RU); **F04D 13/086** (2013.01 - RU); **F04D 15/02** (2013.01 - US); **F04D 29/0413** (2013.01 - EP US); **F04D 29/042** (2013.01 - RU); **F04D 29/167** (2013.01 - EP RU US); **F04D 29/22** (2013.01 - US); **F04D 29/2266** (2013.01 - EP US); **F04D 29/445** (2013.01 - US); **F04D 7/04** (2013.01 - EP US); **F04D 13/08** (2013.01 - EP US); **F05D 2230/51** (2013.01 - EP US)

Cited by
IT202100030575A1

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)
WO 2015145196 A1 20151001; CN 106133325 A 20161116; EP 3123031 A1 20170201; EP 3123031 B1 20181212; ES 2714830 T3 20190530; MX 2016012266 A 20170106; RU 2016141422 A 20180424; RU 2662848 C2 20180731; US 2017107990 A1 20170420

DOCDB simple family (application)
IB 2014060106 W 20140324; CN 201480077569 A 20140324; EP 14721501 A 20140324; ES 14721501 T 20140324; MX 2016012266 A 20140324; RU 2016141422 A 20140324; US 201415128594 A 20140324