

Title (en)  
IMPELLER FOR CENTRIFUGAL PUMPS

Title (de)  
LAUFRAD FÜR KREISELPUMPEN

Title (fr)  
ROTOR POUR POMPES CENTRIFUGES

Publication  
**EP 2699803 B1 20200429 (DE)**

Application  
**EP 12717260 A 20120418**

Priority  
• DE 102011007907 A 20110421  
• EP 2012057035 W 20120418

Abstract (en)  
[origin: CA2833193A1] The invention relates to an impeller of a centrifugal pump, comprising at least two blades (4) for conveying media containing solids. According to the invention, the blade leading angle ( $\beta_1$ ) is smaller than  $0^\circ$ . The blade angle ( $\beta$ ) increases in a first section (9) until a value of  $0^\circ$  is reached. In a second section (10), another increase occurs until a maximum value is reached. In a third section (11), the blade angle ( $\beta$ ) decreases again.

IPC 8 full level  
**F04D 29/22** (2006.01); **F04D 29/24** (2006.01)

CPC (source: EP KR US)  
**F01D 5/141** (2013.01 - US); **F04D 29/22** (2013.01 - KR); **F04D 29/2294** (2013.01 - EP US); **F04D 29/24** (2013.01 - KR);  
**F04D 29/242** (2013.01 - EP US)

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 102011007907 B3 20120621**; AU 2012244804 A1 20131017; AU 2012244804 B2 20160218; BR 112013026753 A2 20190924;  
CA 2833193 A1 20121026; CA 2833193 C 20180814; CN 103534489 A 20140122; CN 103534489 B 20161221; DK 2699803 T3 20200727;  
EP 2699803 A2 20140226; EP 2699803 B1 20200429; HU E051436 T2 20210301; JP 2014511973 A 20140519; JP 6092186 B2 20170308;  
KR 101868132 B1 20180618; KR 20140027130 A 20140306; MX 2013010939 A 20131206; RU 2013146836 A 20150527;  
RU 2580237 C2 20160410; US 2014064970 A1 20140306; US 9556739 B2 20170131; WO 2012143367 A2 20121026;  
WO 2012143367 A3 20130110; ZA 201307151 B 20150429

DOCDB simple family (application)  
**DE 102011007907 A 20110421**; AU 2012244804 A 20120418; BR 112013026753 A 20120418; CA 2833193 A 20120418;  
CN 201280019417 A 20120418; DK 12717260 T 20120418; EP 12717260 A 20120418; EP 2012057035 W 20120418;  
HU E12717260 A 20120418; JP 2014505594 A 20120418; KR 20137026259 A 20120418; MX 2013010939 A 20120418;  
RU 2013146836 A 20120418; US 201214007415 A 20120418; ZA 201307151 A 20130923