

Title (en)  
IMPELLER FOR WASTEWATER PUMP

Title (de)  
LAUFRAD FÜR ABWASSERPUMPE

Title (fr)  
ROUE MOBILE POUR POMPE À EAUX USÉES

Publication  
**EP 3662164 A1 20200610 (DE)**

Application  
**EP 18750116 A 20180724**

Priority  
• DE 102017213507 A 20170803  
• EP 2018070025 W 20180724

Abstract (en)  
[origin: WO2019025238A1] The invention relates to an impeller (2) for centrifugal pumps having at least one blade (12). Said impeller (2) is used for delivering solids-containing media. The angle  $\alpha$  is at an angle between a leading edge (17) of the blade (12) and a circumferential direction. The angle  $\beta$  is an angle between a leading edge (17) of the blade (12) and a meridional direction. Depending on the dominant speed, the associated  $\alpha$ ,  $\beta$  is designed to be less than  $90^\circ$ , preferably less than  $70^\circ$ , in particular less than  $50^\circ$ .<i />

IPC 8 full level  
**F04D 7/04** (2006.01); **F04D 13/08** (2006.01); **F04D 29/22** (2006.01); **F04D 29/24** (2006.01)

CPC (source: EP US)  
**F04D 7/04** (2013.01 - EP US); **F04D 13/08** (2013.01 - EP); **F04D 29/225** (2013.01 - EP); **F04D 29/2294** (2013.01 - EP);  
**F04D 29/24** (2013.01 - US); **F04D 29/245** (2013.01 - EP)

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 2019025238 A1 20190207**; AU 2018310551 A1 20200220; AU 2018310551 B2 20231123; BR 112020002141 A2 20200804;  
CA 3071480 A1 20190207; CN 111201378 A 20200526; CN 111201378 B 20240308; DE 102017213507 A1 20190207;  
EP 3662164 A1 20200610; RU 2020104795 A 20210903; RU 2020104795 A3 20211116; SA 520411224 B1 20230226;  
US 11603855 B2 20230314; US 2020240428 A1 20200730

DOCDB simple family (application)  
**EP 2018070025 W 20180724**; AU 2018310551 A 20180724; BR 112020002141 A 20180724; CA 3071480 A 20180724;  
CN 201880065008 A 20180831; DE 102017213507 A 20170803; EP 18750116 A 20180724; RU 2020104795 A 20180724;  
SA 520411224 A 20200202; US 201816635607 A 20180724