

Title (en)  
AXIAL-FLOW IMPELLER

Title (de)  
AXIALSTROMLAUFRAD

Title (fr)  
TURBINE À ÉCOULEMENT AXIAL

Publication  
**EP 3872352 A4 20221026 (EN)**

Application  
**EP 20816374 A 20200707**

Priority  
• CN 201922403606 U 20191227  
• CN 2020100633 W 20200707

Abstract (en)  
[origin: EP3872352A1] Provided is an axial flow impeller including a central hub and multiple blades. The central hub includes a base plate and a stacking sidewall disposed at an edge of the base plate. Multiple first convex portions are disposed at a first edge of the stacking sidewall extending axially, and a first concave portion is disposed between every two adjacent first convex portions. Multiple second convex portions are disposed at a second edge of the stacking sidewall extending axially, and a second concave portion is disposed between every two adjacent second convex portions. The first convex portions are in one-to-one correspondence with the second concave portions in the axial direction, and the first concave portions are in one-to-one correspondence with the second convex portions in the axial direction. The blades are disposed along an external surface of the stacking sidewall, and an edge of each of the multiple blades connected to the stacking sidewall extends from an edge of one of the multiple first convex portions to an edge of an adjacent second convex portion.

IPC 8 full level  
**F04D 29/38** (2006.01); **F04D 29/32** (2006.01); **F04D 29/66** (2006.01)

CPC (source: EP)  
**F04D 29/329** (2013.01); **F04D 29/666** (2013.01); **F05D 2250/182** (2013.01); **F05D 2250/183** (2013.01); **F05D 2250/184** (2013.01); **F05D 2250/71** (2013.01); **F05D 2260/02** (2013.01)

Citation (search report)  
• [X] CN 109469644 A 20190315 - NINGBO LANGDI IMPELLER MACH CO  
• [X] CN 109340181 A 20190215 - MIDEA GROUP CO LTD, et al  
• [X] US 2018087784 A1 20180329 - SAWADA HIROTAKE [JP]  
• [A] WO 2019030867 A1 20190214 - MITSUBISHI ELECTRIC CORP [JP] & US 2021003140 A1 20210107 - YAMAMOTO KATSUYUKI [JP], et al  
• [A] JP 5935033 B2 20160615  
• [A] US D870254 S 20191217 - TERAMOTO TAKUYA [JP], et al  
• See also references of WO 2021128803A1

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

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BA ME

Designated validation state (EPC)  
KH MA MD TN

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**EP 3872352 A1 20210901; EP 3872352 A4 20221026**; CN 211259119 U 20200814; WO 2021128803 A1 20210701

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