

Title (en)

Helico-axial pump, rotor for same, method for hydrodynamic bearing of a rotor of a helicon-axial pump and a hybrid pump with a rotor for a helico-axial pump

Title (de)

Helico-axiale Pumpe, ein Rotor für eine helico-axial Pumpe, Verfahren zur hydrodynamischen Lagerung eines Rotors einer helico-axialen Pumpe, sowie eine Hybridpumpe mit einem Rotor für eine helico-axiale Pumpe

Title (fr)

Pompe hélico-axiale, rotor pour une pompe hélico-axiale, palier hydrodynamique d'un rotor d'une pompe hélico-axiale et pompe hybride dotée d'un rotor pour une pompe hélico-axiale

Publication

EP 2386766 B1 20221012 (DE)

Application

EP 11161757 A 20110408

Priority

- EP 10162518 A 20100511
- EP 11161757 A 20110408

Abstract (en)

[origin: EP2386766A2] The helico-axial pump (1) comprises a rotor (2) which is arranged in pump housing (6) around a longitudinal axis (A) in a rotating manner. The rotor comprises a compression level (K) having a helico-axial propeller (3) and a stator (4) for compression of multiphase mixture (M). A hydrodynamic stabilization element (7,71) is arranged with a stabilization surface (700) in the pump housing, where a stabilization gap (8) is formed for the stabilization surface. Independent claims are also included for the following: (1) a rotor with a hydrodynamic stabilization layer which is made of a stabilization medium; (2) a hybrid pump with a rotor; and (3) a method for hydrodynamic support of a rotor.

IPC 8 full level

F04D 29/66 (2006.01); **F04D 29/047** (2006.01); **F04D 29/057** (2006.01); **F04D 31/00** (2006.01)

CPC (source: EP US)

F04D 29/047 (2013.01 - EP US); **F04D 29/057** (2013.01 - EP US); **F04D 29/668** (2013.01 - EP US); **F04D 29/669** (2013.01 - EP US); **F04D 31/00** (2013.01 - EP US)

Citation (examination)

- GB 2312929 A 19971112 - INST FRANCAIS DU PETROLE [FR]
- US 1391799 A 19210927 - SLOCOMB GEORGE W
- FR 963701 A 19500719

Cited by

CN110454408A; EP3913226A1; EP3913227A1; US11879483B2; EP3536975B1

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)

EP 2386766 A2 20111116; **EP 2386766 A3 20171115**; **EP 2386766 B1 20221012**; BR PI1102508 A2 20140422; BR PI1102508 B1 20210126; US 2011280706 A1 20111117; US 9273699 B2 20160301

DOCDB simple family (application)

EP 11161757 A 20110408; BR PI1102508 A 20110510; US 201113091010 A 20110420