Title (en)

HYDRAULIC PUMP

Title (de)

HYDRAULISCHE PUMPE

Title (fr)

POMPE HYDRAULIQUE

Publication

EP 4177471 A1 20230510 (FR)

Application

EP 22205926 A 20221107

Priority

FR 2111834 A 20211108

Abstract (en)

[origin: US2023151812A1] A hydraulic pump includes a casing, an impellor pump comprising a rotor that is rotationally mobile with respect to the casing about a first axis, the rotor comprising several blades in helix form, a transition zone belonging to the casing and having, on the side of the impellor pump, a ramp in helix form developing in the same direction as the helix form of the blades, a trochoid pump comprising a rotor with outer toothing secured to the rotor of the impellor pump, and a rotor with internal toothing that is rotationally mobile with respect to the casing about a second axis parallel to and offset from the first axis, the trochoid pump being fed by the impellor pump through the transition zone running along the ramp.

Abstract (fr)

L'invention concerne une pompe hydraulique comprenant :- un carter (14),- une pompe à aube (20) comprenant un rotor mobile en rotation par rapport au carter (14) autour d'un premier axe (16) le rotor (46) comprenant plusieurs aubes en forme d'hélice,- une zone de transition (28) appartenant au carter (14) et possédant, du côté de la pompe à aube (20), une rampe en forme d'hélice se développant dans le même sens que la forme en hélice des aubes,- une pompe trochoïde (22) comprenant un rotor à denture externe solidaire du rotor de la pompe à aube (20), et un rotor à denture interne mobile en rotation par rapport au carter (14) autour d'un second axe parallèle et décalé du premier axe (16), la pompe trochoïde (22) étant alimentée par la pompe à aube (20) au travers de la zone de transition (28) en longeant la rampe.

IPC 8 full level

F04D 3/02 (2006.01); **F04C 2/10** (2006.01); **F04C 11/00** (2006.01); **F04D 13/12** (2006.01); **F04D 29/18** (2006.01); **F04D 29/24** (2006.01); **F04D 29/54** (2006.01)

CPC (source: EP US)

F01C 21/0809 (2013.01 - US); **F04C 2/102** (2013.01 - EP); **F04C 11/005** (2013.01 - EP US); **F04D 3/02** (2013.01 - EP); **F04D 13/12** (2013.01 - EP US); **F04D 29/181** (2013.01 - EP); **F04D 29/242** (2013.01 - EP); **F04D 29/548** (2013.01 - EP); F04C 2/102 (2013.01 - US); F04C 11/008 (2013.01 - US); F04C 2220/00 (2013.01 - EP); F04C 2240/10 (2013.01 - US); F04C 2240/20 (2013.01 - US); F04C 2240/30 (2013.01 - US); F04C 2240/60 (2013.01 - EP US); F04D 29/181 (2013.01 - US); F04D 29/242 (2013.01 - US); F04D 29/548 (2013.01 - US)

Citation (search report)

- [A] US 2017211577 A1 20170727 - DUNCAN PATRICK WILSON [US], et al
- [A] US 2005191186 A1 20050901 - HARRIS PAUL [GB], et al
- [A] DE 102018212497 A1 20200130 - ECKERLE TECH GMBH [DE]

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

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DOCDB simple family (application)

EP 22205926 A 20221107; FR 2111834 A 20211108; US 202217982223 A 20221107