

Title (en)
INTERNALLY CURVED LOW-SPEED HIGH-TORQUE HYDRAULIC MOTOR WITH TORQUE BEING OUTPUT BY MEANS OF ROTATION OF HOUSING

Title (de)
INTERN GEKRÜMMTER HYDRAULIKMOTOR MIT GERINGER DREHZAHL UND HOHEM DREHMOMENT MIT DREHMOMENTABGABE MITTELS ROTATION DES GEHÄUSES

Title (fr)
MOTEUR HYDRAULIQUE À COUPLE ÉLEVÉ À FAIBLE VITESSE À COURBURE INTERNE, AVEC SORTIE DE COUPLE PAR ROTATION DE BOÎTIER

Publication
EP 3460229 A4 20191204 (EN)

Application
EP 16921802 A 20161118

Priority
CN 2016000642 W 20161118

Abstract (en)
[origin: EP3460229A1] Disclosed is an internally curved low-speed high-torque hydraulic motor with torque being output by means of the rotation of a housing. The hydraulic motor is composed of a left bearing block (1), a right end cover (7), a spacer ring (3), a cylinder body (4), an internally curved cam ring (2), an axial oil distribution pan (6) and a plurality of radially arranged plunger assemblies (5). The axial oil distribution pan (6) is axially arranged on one side of the cylinder body (4). The internally curved cam ring (2), the left bearing block (1), the spacer ring (3) and the right end cover (7) are connected in series via high-strength bolts so as to form a motor housing. The motor is composed of the fixed cylinder body (4) and the rotatable housing. The structure broadens the application fields of the internally curved low-speed high-torque hydraulic motor, optimizes the mechanical structure of a driving portion of the motor, reduces costs, and reduces transmission links so as to become a direct drive, eliminates low-speed crawling and increases stability and reliability during operation. Under acting forces of a spring and a balancing plunger provided in the axial oil distribution pan, contact surfaces between the axial oil distribution pan and the cylinder body can always be tightly fitted, thereby reducing internal leakage of the motor and prolonging the service life of the motor.

IPC 8 full level
F03C 1/00 (2006.01); **F03C 1/047** (2006.01); **F03C 1/08** (2006.01); **F03C 1/34** (2006.01)

CPC (source: EP)
F03C 1/00 (2013.01); **F03C 1/0435** (2013.01); **F03C 1/0474** (2013.01)

Citation (search report)
• [XA] DE 2004773 A1 19710819
• [X] CN 2619064 Y 20040602 - ZHUZHOU COAL MINE MACHINERY PL [CN]
• [X] GB 2055987 A 19810311 - PARTEK AB
• [A] EP 2980405 A2 20160203 - POCLAIN HYDRAULICS IND [FR]
• See references of WO 2018090159A1

Cited by
CN115875186A; WO2023111622A1

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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