

Title (en)
MULTISTAGE OIL PUMP

Title (de)
MEHRSTUFIGE ÖLPUMPE

Title (fr)
POMPE À HUILE MULTI-ÉTAGE

Publication
EP 2878822 A4 20160330 (EN)

Application
EP 13791334 A 20130516

Priority
• JP 2012113481 A 20120517
• JP 2013063651 W 20130516

Abstract (en)
[origin: EP2878822A1] Conventional multistage oil pumps could not have been used in an application where the pressure and the temperature are high. With a multistage oil pump 1 in the present disclosure, two rotors 6, 7 are connected in series in the direction of the rotation axis. The respective rotors 6, 7 are accommodated in a rotor case 4 separately across a spacer 5, the inside thereof being partitioned by the spacer part 5. The rotor case 4 is in the form of an integral cylindrical part, and the spacer 5 is integral with the rotor case 4. The rotors 6, 7 and the rotor case 4 are made of a ferrous material, and the rotor case 4 is fixed to a housing 2 by positioning pins.

IPC 8 full level
F04C 15/00 (2006.01); **F01C 21/10** (2006.01); **F04C 2/10** (2006.01); **F04C 11/00** (2006.01); **F04C 15/06** (2006.01)

CPC (source: CN EP US)
F01C 21/108 (2013.01 - EP US); **F04C 2/082** (2013.01 - US); **F04C 2/102** (2013.01 - CN EP US); **F04C 11/001** (2013.01 - CN EP US);
F04C 15/06 (2013.01 - CN EP US); **F04C 2240/30** (2013.01 - CN EP US); **F05C 2201/021** (2013.01 - EP US)

Citation (search report)
• No further relevant documents disclosed
• See references of WO 2013172410A1

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 2878822 A1 20150603; EP 2878822 A4 20160330; CN 104302917 A 20150121; JP 2013238210 A 20131128; US 2015167665 A1 20150618;
WO 2013172410 A1 20131121

DOCDB simple family (application)
EP 13791334 A 20130516; CN 201380025648 A 20130516; JP 2012113481 A 20120517; JP 2013063651 W 20130516;
US 201314401598 A 20130516