

Title (en)
WATER PUMP

Title (de)
WASSERPUMPE

Title (fr)
POMPE À EAU

Publication
EP 2930368 A4 20151223 (EN)

Application
EP 13860855 A 20131121

Priority
• JP 2012265496 A 20121204
• JP 2013081348 W 20131121

Abstract (en)
[origin: EP2930368A1] A water pump that does not easily drain a liquid stored in a liquid storage space outside is provided. The water pump includes a driving rotary body being drivingly rotated by a drive mechanism, a pump shaft rotating by a power transmission from the driving rotary body, a housing being inserted with the pump shaft, an impeller being fixed at one end side of the pump shaft, an electromagnetic clutch including a clutch portion being disposed at the other end side of the pump shaft, the clutch portion switching on and off the power transmission from the driving rotary body to the pump shaft, a mechanical seal being disposed at a position between the impeller and the clutch portion, the mechanical seal being mounted between the pump shaft and the housing, and the liquid storage space allowing to store the liquid leaking out from a side of the impeller to a side of the clutch portion via the mechanical seal. The electromagnetic clutch includes a yoke holding an electromagnetic coil. The liquid storage space is formed at the housing. The yoke is in contact with the housing.

IPC 8 full level
F04D 13/02 (2006.01); **F04D 29/10** (2006.01); **F04D 29/58** (2006.01)

CPC (source: EP)
F04D 13/021 (2013.01); **F04D 29/106** (2013.01); **F04D 29/5893** (2013.01); **F05D 2260/6022** (2013.01)

Citation (search report)
• [X] WO 2010058233 A1 20100527 - WOP IND E COM DE BOMBAS LTDA [BR], et al
• [ID] JP 2010242623 A 20101028 - HITACHI AUTOMOTIVE SYSTEMS LTD
• [A] JP S54111027 A 19790831 - TOYOTA MOTOR CO LTD
• [A] EP 1921323 A2 20080514 - AISIN SEIKI [JP]
• [A] JP 2004108250 A 20040408 - AISIN SEIKI
• See also references of WO 2014087845A1

Cited by
US10393140B2; US11988218B2

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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EP 2930368 A1 20151014; EP 2930368 A4 20151223; EP 2930368 B1 20190403; JP 2014109261 A 20140612; JP 6107092 B2 20170405; WO 2014087845 A1 20140612

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