

Title (en)
A POSITIVE DISPLACEMENT PUMP WITH A BLADE ROTOR

Title (de)
VERDRÄNGERPUMPE MIT LAUFSCHAUFELROTOR

Title (fr)
POMPE À DÉPLACEMENT POSITIF AYANT UN ROTOR À PALES

Publication
EP 3279477 A1 20180207 (EN)

Application
EP 17184197 A 20170801

Priority
IT 201600082659 A 20160804

Abstract (en)
A positive displacement pump with variable displacement comprising: - a blade rotor (2); - a stator (3) comprising a collar (30) internally of which the rotor (2) can rotate. The collar (30) defines at least a first channel (4) which contributes to an introduction of fluid between the rotor (2) and the stator (3). The first channel (4) reduces an axial thickness of the collar (30) in a zone in which it is fashioned. The first channel (4) directs the fluid so as to reduce a misalignment with a second flow of fluid which is short-circuited by the rotor (2). When displacing from a radially more external position (991) towards a radially more internal position (992), the first channel (4) defines a ramp (99). The ramp (99) reduces the depth of the first channel (4), the depth being measured parallel to the rotation axis (20).

IPC 8 full level
F04C 2/344 (2006.01); **F04C 14/22** (2006.01)

CPC (source: EP)
F04C 2/3442 (2013.01); **F04C 2/3446** (2013.01); **F04C 14/226** (2013.01)

Citation (applicant)
• US 2011189043 A1 20110804 - WATANABE YASUSHI [JP], et al
• EP 2351934 A1 20110803 - PIERBURG PUMP TECHNOLOGY GMBH [DE]

Citation (search report)
• [A] US 2011189043 A1 20110804 - WATANABE YASUSHI [JP], et al
• [A] US 5366354 A 19941122 - YUGE KAZUYOSHI [JP]
• [A] EP 2351934 A1 20110803 - PIERBURG PUMP TECHNOLOGY GMBH [DE]
• [A] US 2466622 A 19490405 - TUCKER WARREN R, et al
• [A] EP 2865920 A1 20150429 - HYUNDAI MOTOR CO LTD [KR], et al
• [A] WO 9314318 A1 19930722 - GLYCO METALL WERKE [DE]

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EP4160019A1; US11873812B2

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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