

Title (en)  
ELECTRIC GEAR PUMP

Title (de)  
ELEKTRISCHE GETRIEBEPUMPE

Title (fr)  
POMPE À ENGRENAGE ÉLECTRIQUE

Publication  
**EP 3521623 A1 20190807 (EN)**

Application  
**EP 19155225 A 20190204**

Priority  
JP 2018019575 A 20180206

Abstract (en)  
An electric gear pump includes: an electric motor 2 in which a supply of motor current rotates a motor shaft 21; a driving gear 3 that is coupled to the motor shaft 21 to be rotated; a driven gear 4 that is rotated by meshing between outer teeth 31 of the driving gear 3 and outer teeth 41 of the driven gear 4; and a control unit 7 that outputs motor current to control the electric motor 2. When the electric motor 2 that stopped is started and when the rotation of the electric motor 2 is reversed, the control unit 7 executes rotational speed restricting control that suppresses the motor current to restrict the rotational speed of the electric motor 2 at least during an idling period, the idling period being a period until the outer tooth 31 of the driving gear 3 and the outer tooth 41 of the driven gear 4 abut against each other in a rotational direction of the electric motor 2. Selected drawing:

IPC 8 full level  
**F04C 2/18** (2006.01); **F04C 14/04** (2006.01); **F04C 14/08** (2006.01)

CPC (source: CN EP)  
**F04C 2/18** (2013.01 - CN EP); **F04C 11/00** (2013.01 - CN); **F04C 14/04** (2013.01 - CN EP); **F04C 14/08** (2013.01 - CN EP); **F04C 2240/403** (2013.01 - EP); **F04C 2270/075** (2013.01 - EP); **F04C 2270/13** (2013.01 - EP)

Citation (applicant)  
JP 2001289180 A 20011019 - KAYABA INDUSTRY CO LTD

Citation (search report)  
• [I] US 2011129356 A1 20110602 - KOBAYASHI YOSHIYUKI [JP], et al  
• [I] EP 2670046 A1 20131204 - JTEKT CORP [JP]  
• [A] US 2016084274 A1 20160324 - AFSHARI THOMAS [US]  
• [A] JP 2013249820 A 20131212 - SINFONIA TECHNOLOGY CO LTD

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3521623 A1 20190807**; **EP 3521623 B1 20201007**; CN 110118173 A 20190813; CN 110118173 B 20230428; JP 2019138166 A 20190822; JP 7052387 B2 20220412

DOCDB simple family (application)  
**EP 19155225 A 20190204**; CN 201910106873 A 20190202; JP 2018019575 A 20180206