

Title (en)

Gear wheel machine with force sensor in the form of a piezo film

Title (de)

Zahnradmaschine mit Kraftsensor in Form einer Piezofolie

Title (fr)

Machine à engrenages avec capteur de force en forme de feuille piézoélectrique

Publication

EP 2696075 A3 20160323 (DE)

Application

EP 13178333 A 20130729

Priority

DE 102012214229 A 20120810

Abstract (en)

[origin: EP2696075A2] The machine (10) has two gear wheels disengaged with each other. The tooth edges are surrounded by a main body (31) and lids with a low pressure connection (32) and a high pressure connection (33). Each gear wheel has bearing pins, which are rotatably mounted in bearing bodies (50). The bearing bodies are slidingly movably accommodated in the main body relative to rotational axis of one of the toothed wheels. A piezo film (70) is arranged between the bearing bodies and the main body. A sensor directly measures a force acting on the gear wheels.

IPC 8 full level

F04C 2/18 (2006.01)

CPC (source: EP)

F04C 2/18 (2013.01); **F04C 2240/81** (2013.01); **F04C 2270/042** (2013.01)

Citation (search report)

- [A] DE 102007051349 A1 20090430 - BOSCH GMBH ROBERT [DE]
- [A] DE 102007051350 A1 20090430 - BOSCH GMBH ROBERT [DE]
- [A] YUJI MIHARA ET AL: "Measurement of Oil-Film Pressure in Engine Bearings Using a Thin-Film Sensor", TRIBOLOGY TRANSACTIONS, vol. 45, no. 1, 26 February 2001 (2001-02-26) - 28 February 2001 (2001-02-28), US, pages 11 - 20, XP055246948, ISSN: 1040-2004, DOI: 10.1080/10402000208982516

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 2696075 A2 20140212; EP 2696075 A3 20160323; EP 2696075 B1 20170503; DE 102012214229 A1 20140213

DOCDB simple family (application)

EP 13178333 A 20130729; DE 102012214229 A 20120810