Title (en)

ELECTRO-HYDRAULIC ACTUATOR WITH PUMP INCORPORATED INTO THE PISTON

Title (de)

ELEKTROHYDRAULISCHER AKTUATOR MIT IN DEN KOLBEN INTEGRIERTER PUMPE

Title (fr)

ACTIONNEUR ELECTROHYDRAULIQUE A POMPE INTEGREE DANS LE PISTON.

Publication

EP 2288814 B1 20120215 (FR)

Application

EP 09766006 A 20090612

Priority

- FR 2009000701 W 20090612
- FR 0803370 A 20080617

Abstract (en)

[origin: WO2009153444A1] The invention relates to an electro-hydraulic actuator comprising a body (1) which defines a cylindrical cavity (2) in which a piston (3) sealingly slides and divides the internal volume of the cavity into two variable-volume chambers (A, B), the piston being associated with at least one rod (4) which passes sealingly through an end wall of the cavity, the actuator comprising a two-way pump (5) having two ports (Pl, P2) each connected to one of the chambers, an electric motor (8) for selectively driving the pump in one direction or the other, the pump being positioned in the piston of the actuator so that it can move therewith. According to the invention, the motor is placed at the end of an actuator and drives a shaft (6) of non-circular cross section extending into the cavity parallel to a direction of sliding of the piston (3) and of the rod (4), the shaft passing through the piston (3) in order to collaborate with a homologous drive member (11; 21) of the pump sliding freely along the shaft as the rod moves but rotationally driven as the shaft rotates under the action of the electric motor.

IPC 8 full level

F15B 15/18 (2006.01)

CPC (source: EP US)

F15B 15/1447 (2013.01 - EP US); **F15B 15/18** (2013.01 - EP US); F15B 15/1466 (2013.01 - EP US); F15B 2211/20515 (2013.01 - EP US); F15B 2211/20538 (2013.01 - EP US); F15B 2211/20561 (2013.01 - EP US); F15B 2211/785 (2013.01 - EP US)

Designated contracting state (EPC)

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 SE SI SK TR

DOCDB simple family (publication)

WO 2009153444 A1 20091223; AT E545786 T1 20120315; BR PI0914832 A2 20151027; CA 2728152 A1 20091223; CA 2728152 C 20131119; CN 102066773 A 20110518; CN 102066773 B 20131113; EP 2288814 A1 20110302; EP 2288814 B1 20120215; ES 2382269 T3 20120606; FR 2932539 A1 20091218; FR 2932539 B1 20100730; IL 210008 A0 20110228; JP 2011524506 A 20110901; JP 5421363 B2 20140219; RU 2457369 C1 20120727; US 2011146262 A1 20110623; US 8863510 B2 20141021

DOCDB simple family (application)

FR 2009000701 W 20090612; AT 09766006 T 20090612; BR PI0914832 A 20090612; CA 2728152 A 20090612; CN 200980122833 A 20090612; EP 09766006 A 20090612; ES 09766006 T 20090612; FR 0803370 A 20080617; IL 21000810 A 20101215; JP 2011514082 A 20090612; RU 2011101465 A 20090612; US 99957709 A 20090612