

Title (en)

Dual-effect hydraulic actuator handling system for gate moving

Title (de)

Betätigungseinrichtung mit doppelwirkendem Zylinder zum Bewegen eines Tors

Title (fr)

Système de manipulation d'actionneur hydraulique double effet pour le déplacement d'une grille

Publication

**EP 1832756 A3 20091230 (EN)**

Application

**EP 07004321 A 20070302**

Priority

IT MI20060426 A 20060310

Abstract (en)

[origin: EP1832756A2] A system for handling gates and the like including a dual-effect hydraulic actuator (11) with a stem traversing one (11b) of its chambers and a supply circuit (14) controlled with oil which alternately moves the oil between the actuator chambers (11a, 11b) for an 'opening' or 'closing' movement. The circuit includes a pump (13) for transfer of the oil between the chambers through piloted locking one-way valves (19, 20), an oil tank (12) and two one-way suction valves (15, 16) each connected between the tank (12) and one of the two sides of the pump (13) for allowing suction from the tank of the lacking oil. The suction valve (15) connected from the side of the pump opposite the actuator chamber (11a) not traversed by the stem is a one-way valve controlled in such a manner as to open thanks to an overpressure on the hydraulic circuit branch which is for supply of the actuator chamber (11b) traversed by the stem. In this manner the oil in excess during movement of the actuator which is caused by transfer of the oil from the stemless chamber (11a) to the chamber (11b) with stem is dumped into the tank (12).

IPC 8 full level

**F15B 7/00** (2006.01); **F15B 7/10** (2006.01)

CPC (source: EP US)

**F15B 7/006** (2013.01 - EP US); **F15B 7/10** (2013.01 - EP US); **F15B 2211/20561** (2013.01 - EP US); **F15B 2211/3051** (2013.01 - EP US); **F15B 2211/613** (2013.01 - EP US); **F15B 2211/7053** (2013.01 - EP US)

Citation (search report)

- [X] US 4343153 A 19820810 - KERN CALVIN V, et al
- [A] EP 0893605 A1 19990127 - HOERBIGER GMBH [DE]

Cited by

EP2175143A1; AT516317B1; ITVI20080233A1; WO2012119817A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

**EP 1832756 A2 20070912**; **EP 1832756 A3 20091230**; **EP 1832756 B1 20110601**; AT E511608 T1 20110615; CN 101033671 A 20070912; CN 101033671 B 20120627; DK 1832756 T3 20110919; ES 2367373 T3 20111102; IT MI20060426 A1 20070911; PL 1832756 T3 20111130; PT 1832756 E 20110901; US 2007209502 A1 20070913

DOCDB simple family (application)

**EP 07004321 A 20070302**; AT 07004321 T 20070302; CN 200710086223 A 20070309; DK 07004321 T 20070302; ES 07004321 T 20070302; IT MI20060426 A 20060310; PL 07004321 T 20070302; PT 07004321 T 20070302; US 71668107 A 20070312