

Title (en)

Low-loss drive system for a hydraulic actuator

Title (de)

Verlustarmer Antrieb für einen hydraulischen Aktuator

Title (fr)

Systeme d'entrainement a faible perte pour un actuateur hydraulique

Publication

EP 1288507 B1 20060118 (DE)

Application

EP 02023249 A 19961221

Priority

- DE 19600650 A 19960110
- DE 19642163 A 19961012
- EP 96944055 A 19961221

Abstract (en)

[origin: DE19600650A1] The hydraulic fluid is supplied by a first bidirectional pump (15), in parallel with which a second pump (15') also rotates at a controlled speed. Each pump supplies a separate inlet (61.1. or 61.2) of a preferably four-position valve arrangement (59) whose outlets (63.1,63.1' etc.) supply separate double-acting piston actuators (1.1-1.3) and a hydraulic motor (1.4). The pumps are driven by separate motors (19,19') subject to a common control unit (57) containing a driver and processing circuit for each actuator, which has a sensor (39) optionally incorporating a digitiser for signalling the position, speed and/or acceleration of the piston (5) or piston rod (7).

IPC 8 full level

F15B 7/00 (2006.01); **F15B 11/08** (2006.01); **F15B 11/17** (2006.01); **F15B 21/14** (2006.01)

CPC (source: EP)

F15B 11/08 (2013.01); **F15B 11/17** (2013.01); **F15B 2211/20515** (2013.01); **F15B 2211/20561** (2013.01); **F15B 2211/20569** (2013.01); **F15B 2211/20576** (2013.01); **F15B 2211/2658** (2013.01); **F15B 2211/27** (2013.01); **F15B 2211/30585** (2013.01); **F15B 2211/6303** (2013.01); **F15B 2211/6336** (2013.01); **F15B 2211/6651** (2013.01); **F15B 2211/6658** (2013.01); **F15B 2211/71** (2013.01)

Cited by

DE102010017912A1; CN109915442A; CN104179736A; JPWO2017056702A1; EP3358202A4; DE102014218884A1; DE102014218885A1; DE102014218884B4; DE102010017912B4; US9689407B2; US9903394B2; US10718357B2; US11384777B2

Designated contracting state (EPC)

DE FR GB IT NL

DOCDB simple family (publication)

DE 19600650 A1 19970724; **DE 19600650 C2 20030528**; DE 59610776 D1 20031120; EP 1288507 A2 20030305; EP 1288507 A3 20030507; EP 1288507 B1 20060118; IN 188385 B 20020914; ZA 9777 B 19970711

DOCDB simple family (application)

DE 19600650 A 19960110; DE 59610776 T 19961221; EP 02023249 A 19961221; IN 627BO1996 A 19961231; ZA 9777 A 19970106