

Title (en)

TORQUE MOTORS AND VALVE ASSEMBLIES

Publication

EP 0202011 A3 19870826 (EN)

Application

EP 86302506 A 19860404

Priority

GB 8508803 A 19850404

Abstract (en)

[origin: EP0198635A2] An electrohydraulic servo valve (10) comprises a pair of electric motors (11) mounted on the body (13) of a linear hydraulic spool valve (12) and driving a common motor shaft (77) whose rotation is transmitted directly to the valve spool (20) by a pivoted lever (90), one end of which is engaged in a cross-bore (89) in the motor shaft (77) and the other end of which is engaged in a cross-bore (30) in the valve spool (20). The lever (90) is pivotally suspended by two integral rectangular-section thin steel strips projecting at right angle from opposite sides of the lever and secured by screwed-down integral mounting blocks (107) at their outer ends. The strips are arranged with their widths transverse to the length of the lever (90), and twist resiliently about their lengths as the lever pivots about a pivotal axis (92) coincident with the lengths of the strips (105,106) providing a frictionless pivotal suspension for the lever with a resilient centering action.

IPC 1-7

H01F 7/14

IPC 8 full level

F15B 13/04 (2006.01); **F15B 13/043** (2006.01); **F15B 13/044** (2006.01); **H01F 7/14** (2006.01)

CPC (source: EP)

F15B 13/0402 (2013.01); **F15B 13/043** (2013.01); **F15B 13/0442** (2013.01); **H01F 7/14** (2013.01); **F15B 2013/0412** (2013.01); **F15B 2013/0448** (2013.01)

Citation (search report)

- [X] DE 3113532 A1 19821104 - CHANG JAI CHUN DIPL ING
- [A] DE 2923052 A1 19801218 - TESCH WERNER
- [A] DE 1081558 B 19600512 - OTTO STAHL
- [A] US 4061121 A 19771206 - MACLEOD JOHN NORMAN
- [A] DE 360533 C 19221003 - HUGO KREBS, et al
- [A] EP 0058791 A1 19820901 - WINTERBOTHAM HAROLD
- [X] PATENT ABSTRACTS OF JAPAN, vol. 7, no. 144 (E-183)[1289], 23rd June 1983; & JP-A-58 54 859 (YOSHIKAZU TATEYAMA) 31-03-1983
- [XP] PATENT ABSTRACTS OF JAPAN, vol. 10, no. 192 (E-417)[2248], 5th July 1986; & JP-A-61 35 145 (SUMITOMO SPECIAL METALS CO. LTD) 19-02-1986
- [A] IEE PROCEEDINGS, vol. 129, Pt.B, no. 5, September 1982, pages 251-261, Old Woking, Surrey, GB; D.E. HESMONDHALGH et al.: "Slotless construction for small synchronous motors using samarium cobalt magnets"

Cited by

CN103452931A; GB2226453A; GB2226453B

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0198635 A2 19861022; EP 0198635 A3 19870114; EP 0202011 A2 19861120; EP 0202011 A3 19870826; ES 553721 A0 19861201; ES 553722 A1 19871116; ES 8701940 A1 19861201; GB 8508803 D0 19850509

DOCDB simple family (application)

EP 86302507 A 19860404; EP 86302506 A 19860404; ES 553721 A 19860404; ES 553722 A 19860404; GB 8508803 A 19850404