

Title (en)
FLUID CONTROL DEVICE.

Title (de)
VORRICHTUNG ZUM REGELN VON FLÜSSIGKEITEN.

Title (fr)
DISPOSITIFS DE COMMANDE DE FLUIDE.

Publication
EP 0105895 A4 19840810 (EN)

Application
EP 83901307 A 19830324

Priority
AU PF328082 A 19820324

Abstract (en)
[origin: WO8303455A1] A fluid control device of the sliding spool type having pilot control wherein a control profile (20) is located in a longitudinal bore through the spool (4) and has radial clearance (22) in said bore. The control profile (20) separates respective control chambers (12, 14) which extend to the main bore in which the spool is located and an orifice arrangement (5) in the wall of said spool (20) directs secondary fluid flow from a pressure port (10) onto said control profile and into said chambers (12, 14) whereby an imbalance in the chamber pressures will cause sliding movement of the spool. Further respective orifices (6, 8) allow said secondary flow to return to the low pressure side of a fluid supply. The control profile (20) is arranged on a rod which extends externally of the body of the device and sliding movement of the rod causes imbalance of a hydraulic Wheatstone bridge formed by the orifices (5, 6, 8) in combination with the control profile (20) whereby the bridge tends towards equilibrium causing the spool (4) to follow movement of said control profile (20) in a force feedback gain manner. The device has a position feedback ratio of 1:1.

IPC 1-7
F16K 11/07

IPC 8 full level
F15B 13/04 (2006.01); **F16K 11/07** (2006.01); **F16K 27/04** (2006.01)

CPC (source: EP)
F15B 13/0402 (2013.01); **F16K 11/0716** (2013.01); **F16K 27/041** (2013.01)

Citation (search report)
• [X] US 2526709 A 19501024 - TAIT WILLIAM O
• [A] FR 2301752 A1 19760917 - SCHNEIDER CO OPTISCHE WERKE [DE]
• [A] FR 2292913 A1 19760625 - ELMEG [DE]
• [A] CH 240030 A 19451130 - BRANDENBERGER HEINRICH DR ING [CH]

Cited by
US7210473B2; GB2413616A; GB2413616B; US7533664B2

Designated contracting state (EPC)
DE FR GB SE

DOCDB simple family (publication)
WO 8303455 A1 19831013; EP 0105895 A1 19840425; EP 0105895 A4 19840810; JP S59500481 A 19840322

DOCDB simple family (application)
AU 8300036 W 19830324; EP 83901307 A 19830324; JP 50154083 A 19830324