

Title (en)

HIGH-POWER ELECTRIC CIRCUIT BREAKER WITH A HYDRAULICALLY OPERATED ACTUATING DEVICE

Publication

EP 0074419 B1 19860108 (DE)

Application

EP 81107195 A 19810911

Priority

EP 81107195 A 19810911

Abstract (en)

[origin: EP0074419A1] 1. A high power switch (2) including a hydraulic differential piston actuator (3) adapted to be continually biased in the opening direction of the switch by a high pressure source (38, 39) and to be selectively biased in the closing direction through a 2/3 way poppet valve (1a) comprising a valve body (46) disposed in a housing bore of said poppet valve for reciprocating movement between a first closure position (I) in which said differential piston actuator (3) is biased in the closing direction, and a second closure position (II) in which said differential piston actuator (3) is biased in the opening direction, and having two spaced sealing surfaces (44, 45) alternately engageable with one of two valve seats (42, 43) of equal diameter disposed between a passage (A) connected to the differential piston actuator (3), a return passage (R), and a pressure inlet (P), the two ends of said valve body (46) being provided with first and second piston-shaped extensions (50, 51) projecting into respective control chambers (52, 53), further including two alternately operable auxiliary control valves (8, 9) for displacing said valve body (46) between the two closure positions (I + II), and at least one guiding and sealing section (47) formed on said valve body (46) and extending between said first extension (50) and the sealing surface (44) cooperating with said valve seat (42) located between said return passage (R) and said passage (A) whilst being sealingly guided in said housing bore, characterized in that the control chamber (53) receiving said second extension (51) is in continual and direct communication with said high pressure source (38, 39), in that both auxiliary control valves (8, 9) are associated with the other control chamber (52), in that said valve body (46) has a further guiding and sealing section (48) adjacent its end associates with said pressure inlet (P), the diameter (D) of said section being equal to the diameter (D) of said valve seats (42, 43), and in that the pressure-receiving surface area of said second extension (51) is smaller than the pressure-receiving surface area of said first extension (50).

IPC 1-7

H01H 33/34; F15B 13/01

IPC 8 full level

H01H 33/34 (2006.01)

CPC (source: EP)

H01H 33/34 (2013.01); **H01H 2033/308** (2013.01)

Cited by

CN104425175A; FR2539465A1; CN105003478A; EP0229918A1; EP1302958A1; US6761186B2; EP2282065A1

Designated contracting state (EPC)

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