

Title (en)

Bistable hydraulic valve for operating a piston of a fast high tension circuit breaker.

Title (de)

Bistabiles hydraulisches Ventil für die Steuerung eines Kolbens eines schnellen Hochspannungs-Leistungsschalters.

Title (fr)

Clapet hydraulique bistable pour la commande d'un vérin de disjoncteur rapide à haute tension.

Publication

EP 0022729 A1 19810121 (FR)

Application

EP 80401062 A 19800715

Priority

FR 7918757 A 19790716

Abstract (en)

1. Hydraulically-actuated operating system of a jack associated with a switching operation mechanism of a high tension circuit breaker for closing and opening of the contacts, said device including : - an accumulator (56) filled with oil under pressure, - a lower pressure sump (72) for the leakage of the jack (15) oil when the tripping occurs, - an hydraulic poppet valve (10) to selectively connect the jack (15), either to the accumulator (56) for closure and hold of the contacts in switch-off position, or to the sump (72) for venting when the tripping occurs, - supply (58) and back-flow (70) ducts for the connection of the poppet valve to the accumulator (56) and to the sump (72) respectively, - a fixed body (12) equipped with a first seat (40) located in close proximity to a leakage port (68) of a back-flow duct (70), and with a second seat (48) located in close proximity to an inlet port (54) of the supply duct (58), the two seats (40, 48) being shifted from each other by a predetermined axial gap, - and a propelling unit (14, 200), capable of moving the poppet valve between the two seats (40, 48) of said gap to ensure closure or tripping of the circuit breaker, said poppet valve (10) comprising a closing member (28) capable of sliding in a reaming (32) of the body (12), characterized in that the closing member (28) of the poppet valve (10) is stable in the two farthest positions of limit closure and tripping, and is formed by an hollow cylinder (30) comprising : - a first supporting face (38) at one of the cylinder (30) ends being brought into stable engagement in limit closure against the first seat (40) disposed between the back-flow duct (70) and the jack, (15) duct (62a), - a second supporting face (42) at the opposite end of the cylinder (30) cooperating in stable position of limit tripping with the second seat (48) located between the supply duct (58) and the propelling unit (14, 200), the last one being mechanically coupled to the cylinder (30) on the side of said second supporting face (42), - and an inner duct (62b) opening at the two ends of the cylinder (30) by opposite apertures, each showing a size lower than the corresponding seat (40, 48) one.

Abstract (fr)

L'invention est relative à un clapet hydraulique bistable pour la commande d'un vérin. Le clapet (10) comporte un organe d'obturation (28) monté à coulissement bidirectionnel dans un corps (12) entre un premier et un deuxième sièges (40, 48) fixes lors de l'excitation d'un actionneur (14) à effet Thomson pour la mise en communication sélective d'un vérin, soit à un accumulateur (56) d'huile sous pression, soit à une bêche (72) de mise à la purge. Un tiroir (100) est agencé dans le corps (12) entre le siège (48) et l'orifice d'admission (54) pour coopérer avec le rebord (44) en fin de course de déclenchement, de manière à augmenter l'effet des forces hydrodynamiques sur l'organe (28). Application: disjoncteur à haute tension à coupure rapide.

IPC 1-7

H01H 33/34; **H01H 33/28**

IPC 8 full level

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CPC (source: EP)

H01H 33/285 (2013.01); **H01H 33/34** (2013.01); **H01H 2033/308** (2013.01)

Citation (search report)

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