

Title (en)
REGULATING DEVICE FOR DISPLACEMENT PUMPS

Title (de)
REGELEINRICHTUNG FÜR VERDRÄNGERPUMPEN

Title (fr)
SYSTEME DE REGULATION POUR POMPES DE REFOULEMENT

Publication
EP 0782672 A1 19970709 (DE)

Application
EP 95932754 A 19950915

Priority
• DE 4433598 A 19940921
• EP 9503629 W 19950915

Abstract (en)
[origin: US5810565A] PCT No. PCT/EP95/03629 Sec. 371 Date Mar. 12, 1997 Sec. 102(e) Date Mar. 12, 1997 PCT Filed Sep. 15, 1995 PCT Pub. No. WO96/09475 PCT Pub. Date Mar. 28, 1996The invention relates to a displacement pump, e.g. a vane cell pump, with a flow control valve (13) on the control piston (22) which acts on the pump pressure on the one hand and the consumer pressure taken via a choke device on the other. The control piston (22) acts as a pressure controller in which the pressure difference as the pump speed rises acts as a measure of the adjusted quantity conveyed. The choke device for setting the pressure difference contains a throttle piston (17) movable against the force of a spring (16) in a piston bore (15), which closes off an aperture (14) on the pressure side in a control plate (7) in the basic position. According to the invention, the piston bore (15) has a by-pass channel (18) which continuously connects the pump with a spring chamber (15A) in the throttle piston (17). In addition, depending on the flow rate, the throttle piston (17) controls the cross-section of a throttle channel (20) providing a connection between the spring chamber (15A) and the outlet channel (21). The arrangement has the advantage that the differential pressure of the control piston (22) cannot affect the throttle piston (17) of the throttle device. As the spring force acting on the throttle piston (17) can be reduced, power is saved.

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Cited by
EP3521627A4; US11035386B2; WO2018059382A1; WO2018059385A1

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US 5810565 A 19980922; BR 9508971 A 19971111; DE 4433598 A1 19960328; DE 59504439 D1 19990114; EP 0782672 A1 19970709; EP 0782672 B1 19981202; ES 2124589 T3 19990201; JP H10505889 A 19980609; KR 100344812 B1 20021107; KR 970705707 A 19971009; WO 9609475 A1 19960328

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