

Title (en)

Pilot by-pass valve for liquid pumps

Title (de)

Vorgesteuertes Umleitungsventil für Flüssigkeitspumpen

Title (fr)

Dispositif de dérivation piloté pour pompe pour liquides

Publication

**EP 0794333 A1 19970910 (FR)**

Application

**EP 97400494 A 19970304**

Priority

FR 9602820 A 19960306

Abstract (en)

The diverter comprises a body (1) with internal wall (2) delimiting inlet (3) and outlet (4) cavities connected to the discharge (5) and suction (6) sides of the pump. These cavities are separated by a sealing assembly (7) comprising a valve (8), its seat (9) and return spring (10). The valve stem (12) slides in the body and the spring, concentric to the stem, is between the valve head (13) and a stop (14). The valve spring stop is fixed to the rod (16) of the piston (17) of a double acting actuator (18). The actuator inlet (E) and outlet (F) openings are located either side its piston and connected to one or other of two regulating distributors (19,20). The valve (21) of the pressure regulating distributor (19) is sensitive to the pressure difference (Preferably - Pasp) existing between the inlet and outlet cavities. The valve (22) of the vacuum regulating distributor (20) is sensitive to the pressure difference between atmospheric pressure (Patm) and the pressure (Pasp) in the discharge cavity.

Abstract (fr)

L'invention concerne un dispositif de dérivation piloté pour protéger automatiquement les pompes centrifuges ou volumétriques pour liquides fluides ou visqueux contre les phénomènes de surpression et de cavitation. Un tel dispositif peut comprendre des distributeurs de régulation de pression (19) et de vide (20), dont les tiroirs (21, 22) sont sensibles aux couples de pressions refoulement - aspiration et atmosphère - aspiration et commandent le piston (17) d'un vérin (18) à double effet dont la tige (16) est solidaire d'une butée (14) du ressort (10) d'une soupape (8) séparant des cavités d'entrée (3) et de sortie (4) respectivement soumises aux pressions de refoulement et d'aspiration. Utilisation dans la manutention des liquides, notamment les produits pétroliers. <IMAGE>

IPC 1-7

**F04B 49/24**; **F04D 15/00**

IPC 8 full level

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- [A] FR 2701306 A1 19940812 - COMAP [FR]
- [A] US 2715992 A 19550823 - WILSON ROBERT W

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