

Title (en)
Device for delivering fluid materials.

Title (de)
Vorrichtung zum Fördern von fließfähigen Medien.

Title (fr)
Dispositif pour transporter des matériaux fluides.

Publication
EP 0036945 A2 19811007 (DE)

Application
EP 81101334 A 19810225

Priority
DE 3012028 A 19800328

Abstract (en)
1. Apparatus for the conveying of fluid media, more particularly of abrasive liquids, thick sludges, suspensions of solid substances, or the like, with a displacement pump (23) which is interposed between two shutoff valves (14, 15) in the conveying conduit (13) and which sucks in the conveyed medium (11) at its suction stroke and delivers it onwards at its compression stroke, and between the conveying conduit (13) and the working side (22) of the pump (23) there is arranged a separating cylinder (19) with a separating piston (20) capable of moving freely axially therein, and at one face (29) of the said piston the conveyed medium (11) is present and at the other face (39) a working medium (40) acted upon by the pump (23), the separating piston (20) having a somewhat smaller diameter (d) than the separating cylinder (19) and being preloaded by at least one spring element (50) in the direction opposite to the compression direction of the pump (23) and being sealed circumferentially against the conveyed medium (11), characterized in that the separating piston (20) is arranged in a separate separating cylinder (19) which it divides into two cylinder chambers (19a, 19b) which in the end positions of the separating piston (20) have a smaller volume than the working medium (40) moved by the pump (23) at the compression stroke and suction stroke, and that the working side (22) of the pump (23) is connected with a storage container (47) which is closed off from the pump (23) at the compression stroke, and that the separating piston (20) has at its circumference at least one lip-type sealing element (34) having a sealing lip (37) which is directed towards the cylinder chamber (19a) filled with the medium being conveyed and which abuts on the inner wall surface (36) of the cylinder, and which not only seals the separating piston (20) at its circumference relatively to the medium (11) conveyed but also allows the working medium (40) to flow past the separating piston (20) towards the conveying conduit (13).

Abstract (de)
Vorrichtung zum Fördern von fließfähigen Medien, insbesondere von abrasiven Flüssigkeiten, bei der der Saug- und Druckhub einer Verdrängerpumpe (23) über ein Arbeitsmedium (40) auf einen in einem Trennzylinder (19) frei beweglichen, beidseitig durch Federn (50, 51) belasteten Trennkolben (20) übertragen wird, der das Fördermedium (11) beaufschlagt und von der Verdrängerpumpe (23) fernhält. Der Trennkolben (20) kann zugleich als Dosiereinrichtung für eine Zusatzflüssigkeit (48) dienen, die beim Druckhub am Trennkolben (20) vorbei von der Verdrängerpumpe (23) in das Fördermedium (11) gedrückt wird.

IPC 1-7
F04B 21/04; **F04B 13/00**

IPC 8 full level
F04B 15/02 (2006.01); **F04B 13/00** (2006.01); **F04B 53/14** (2006.01); **F04B 53/16** (2006.01)

CPC (source: EP)
F04B 13/00 (2013.01); **F04B 53/142** (2013.01); **F04B 53/143** (2013.01); **F04B 53/164** (2013.01)

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DE19782185C2; DE102005059831B3; EP2154371A1; DE19903061A1; DE19903061C2; DE102013114320A1; CN105829713A; US6234766B1; WO9828540A3; WO2011003899A1; US8940250B2; EP0078384B1

Designated contracting state (EPC)
AT BE CH DE FR GB IT LU NL SE

DOCDB simple family (publication)
EP 0036945 A2 19811007; **EP 0036945 A3 19811125**; **EP 0036945 B1 19831026**; AT E5159 T1 19831115; AU 6857781 A 19811001; BR 8101865 A 19810929; CA 1162104 A 19840214; DE 3012028 A1 19811008; DE 3161257 D1 19831201; JP S56165780 A 19811219

DOCDB simple family (application)
EP 81101334 A 19810225; AT 81101334 T 19810225; AU 6857781 A 19810320; BR 8101865 A 19810327; CA 373760 A 19810324; DE 3012028 A 19800328; DE 3161257 T 19810225; JP 4052081 A 19810323