

Title (en)  
THICK MATTER PUMP

Title (de)  
DICKSTOFFPUMPE

Title (fr)  
POMPE A LIQUIDES EPAIS

Publication  
**EP 1303700 A1 20030423 (DE)**

Application  
**EP 01951644 A 20010628**

Priority  
• DE 10036202 A 20000724  
• EP 0107415 W 20010628

Abstract (en)  
[origin: WO0208605A1] The invention relates to a thick matter pump, especially for delivering concrete. The thick matter pump comprises two delivery cylinders (10), which open into a material feed basin (14) via openings (12) situated on the face. The thick matter pump also comprises two hydraulic drive cylinders (24',24'') whose pistons (26,30',30'') are rigidly interconnected in pairs via a shared piston rod (28). The drive cylinders (24',24'') are connected to a hydraulic reversing pump (42) via rod-side and bottom-side pump connections (34',34'';36',36''). In addition, they communicate with one another on their ends opposite the pump connections via a swing oil line (44). The drive cylinders and, with them, the delivery cylinders are driven in a push-pull manner via the reversing pump (42). In order to reverse the reversing pump (42), two position sensors (52',52'') are provided, which are arranged at a defined distance from one of the ends of the drive cylinders and which respond to a drive piston (30',30'') that is passing by. The aim of the invention is to prevent the formation of concrete clots inside the delivery cylinders (10) as well as the occurrence of a slamming when the drive pistons (30',30'') reach their end of travel. To these ends, the invention provides that both position sensors (52',52'') are arranged at a distance from the rod-side ends of both drive cylinders (24',24'') and that, in addition, a correcting sensor (54) is arranged at a defined distance from the bottom-side end of one of the drive cylinders (24'). Said correcting sensor can be temporarily activated for initiating a reversing process instead of the rod-side position sensor (52'') of the other drive cylinder (24'').

IPC 1-7  
**F04B 9/117**

IPC 8 full level  
**F04B 9/105** (2006.01); **F04B 9/111** (2006.01); **F04B 9/113** (2006.01); **F04B 9/117** (2006.01); **F04B 15/02** (2006.01); **F04B 23/06** (2006.01); **F04B 49/00** (2006.01)

CPC (source: EP KR US)  
**F04B 9/1178** (2013.01 - EP US); **F04B 15/02** (2013.01 - KR); **F04B 15/023** (2013.01 - EP US)

Citation (search report)  
See references of WO 0208605A1

Cited by  
CN104696296A; DE102005039238A1; DE102005039238B4; WO2020048204A1

Designated contracting state (EPC)  
DE ES FR GB IT

DOCDB simple family (publication)  
**WO 0208605 A1 20020131**; DE 10036202 A1 20020207; DE 50107303 D1 20051006; EP 1303700 A1 20030423; EP 1303700 B1 20050831; ES 2247148 T3 20060301; JP 2004505191 A 20040219; JP 4320172 B2 20090826; KR 100803842 B1 20080214; KR 20030015369 A 20030220; US 2003170127 A1 20030911; US 6929454 B2 20050816

DOCDB simple family (application)  
**EP 0107415 W 20010628**; DE 10036202 A 20000724; DE 50107303 T 20010628; EP 01951644 A 20010628; ES 01951644 T 20010628; JP 2002514262 A 20010628; KR 20037000141 A 20030106; US 33380703 A 20030124