

Title (en)

METHOD FOR TRANSMITTING OR CONVEYING FLUID OR SEMI-FLUID MATERIALS BY MEANS OF A DOUBLE PISTON PUMP AND DOUBLE PISTON PUMP THEREFOR

Title (de)

VERFAHREN ZUR ÜBERTRAGUNG ODER FÖRDERUNG VON FLÜSSIGEN ODER HALBFLÜSSIGEN MATERIALIEN MIT EINER DOPPELKOLBENPUMPE UND DOPPELKOLBENPUMPE DAFÜR

Title (fr)

PROCÉDÉ DE TRANSMISSION OU DE TRANSPORT DE MATIÈRES FLUIDES OU SEMI-FLUIDES AU MOYEN D'UNE DOUBLE POMPE À PISTON ET POMPE À PISTON DOUBLE

Publication

**EP 3232057 B1 20180613 (EN)**

Application

**EP 16164647 A 20160411**

Priority

EP 16164647 A 20160411

Abstract (en)

[origin: EP3232057A1] The present invention relates to a method for transmitting or conveying fluid or semi-fluid materials, in particular concrete or cement, by means of a double piston pump (1), which comprises two conveying cylinders (3, 4), each provided inside with a conveying piston (5, 6), said conveying pistons (5, 6) being movable in an alternating push-pull manner, a feed hopper (7) for receiving material to be conveyed, which is fed by a material feed unit, a transfer tube system (13) comprising a transfer tube (14), which is connectable to a flow line or conveying pipes and is capable to connect said flow line or conveying pipes alternately with one of said conveying cylinders (3, 4) by means of articulation means (17), said articulation means (17) comprising two swivel or plunger cylinders (45, 47) being hydraulically actuateable, the swivelling movement of said transfer tube (14) being generated by said swivel or plunger cylinders (45, 47), a conveying piston drive mechanism (23) comprising a drive piston (19, 21) for each conveying piston (5, 6) provided in a hydraulic drive system (24), said drive pistons (19, 21) being connected to the dedicated conveying piston (5, 6), wherein both drive pistons (19, 21) are supplied by a conveying pump (39) being provided in a hydraulic circuit, said supply being controllable by a valve, and a main control valve (V5) with which the alternating hydraulic supply to the corresponding drive piston (19, 21) is controlled, characterised in that during swivelling movement of the transfer tube (14): - the hydraulic supply to the drive pistons (19, 21) is interrupted and said hydraulic circuit of the conveying pump is short-circuited by means of said main control valve (V5), and - the delivery rate of the conveying pump is increased, so that after the swivelling movement of the transfer tube (14) has been terminated and at the beginning of a next conveying cycle an increased supply output of the supplying conveying cylinder (5, 6) is carried out for a short term leading to a short-term increase of said supplied fluid or semi-fluid materials.

IPC 8 full level

**F04B 9/117** (2006.01); **F04B 15/02** (2006.01); **F04B 49/00** (2006.01)

CPC (source: EP)

**F04B 9/1172** (2013.01); **F04B 15/02** (2013.01); **F04B 15/023** (2013.01); **F04B 49/002** (2013.01)

Cited by

CN114956289A; CN113700626A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**EP 3232057 A1 20171018**; **EP 3232057 B1 20180613**; CA 3012564 A1 20171019; CN 108779767 A 20181109; CN 108779767 B 20200121; ES 2687175 T3 20181024; WO 2017178261 A1 20171019

DOCDB simple family (application)

**EP 16164647 A 20160411**; CA 3012564 A 20170403; CN 201780018269 A 20170403; EP 2017057818 W 20170403; ES 16164647 T 20160411