

Title (en)
Positive displacement pumps.

Title (de)
Verdrängungspumpen.

Title (fr)
Pompes à déplacement positif.

Publication
EP 0496170 A2 19920729 (EN)

Application
EP 91312034 A 19911224

Priority
US 63345590 A 19901224

Abstract (en)
A positive displacement pump having single or twin screws (2) is disclosed in which the screw flights (34,36,38,40) are formed in the outer surfaces thereof with balancing holes (82) which can be filled with material less dense than that of the screw flights which can each be closed by a cap (84) having an outer surface which is flush with the outer surface of the adjoining flight. Also disclosed for the or each screw flight is a wear measuring port (86) in which a measuring device can be inserted to measure relative wear between the corresponding screw flight and the pump casing. Alternatively a proximity sensor (98) can be located in the measuring port so that wear of the corresponding flight can be dynamically sensed during pump operation. Additionally, the provision of wear strips (122) on the outer surface of and of less than half the width of the screw flight are disclosed as is a fluid pressure feedback control system (119) for the or each screw flight which reduces the pressure differential over a part of the discharge end of each flight. <IMAGE>

IPC 1-7
F04C 2/08; **F04C 2/16**; **F04C 15/00**; **F04C 15/04**

IPC 8 full level
F04C 2/08 (2006.01); **F04C 2/16** (2006.01); **F04C 13/00** (2006.01); **F04C 14/00** (2006.01); **F04C 14/24** (2006.01); **F04C 14/28** (2006.01); **F04C 15/00** (2006.01)

CPC (source: EP)
F04C 2/084 (2013.01); **F04C 2/16** (2013.01); **F04C 14/28** (2013.01); **F04C 15/0042** (2013.01); **F04C 15/0049** (2013.01); **F04C 2230/605** (2013.01)

Cited by
EP0625641A3; AU714936B2; US6368091B1; GB2299832A; CN114483575A; EP0750117A1; US5934891A; DE4342897C2; EP2204532A3; EP2626511A3; US11486391B2; EP1026399A1; WO9811351A1

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE

DOCDB simple family (publication)
EP 0496170 A2 19920729; **EP 0496170 A3 19921028**; AT E163736 T1 19980315; CA 2058325 A1 19920625; DE 69129037 D1 19980409; DE 69129037 T2 19980723; EP 0560462 A2 19930915; EP 0560462 A3 19940615; EP 0560462 B1 19980304; EP 0830934 A2 19980325; EP 0830934 A3 19980805; ES 2113470 T3 19980501; JP H04330389 A 19921118

DOCDB simple family (application)
EP 91312034 A 19911224; AT 93201194 T 19911224; CA 2058325 A 19911223; DE 69129037 T 19911224; EP 93201194 A 19911224; EP 97202514 A 19911224; ES 93201194 T 19911224; JP 34147491 A 19911224