

Title (en)  
Annular gap seal

Title (de)  
Spaltringdichtung

Title (fr)  
Etanchéité de jeu annulaire

Publication  
**EP 0955466 B1 20021218 (DE)**

Application  
**EP 98106690 A 19980411**

Priority  
EP 98106690 A 19980411

Abstract (en)  
[origin: EP0955466A1] The annular gap(17) in the pump's casing is formed between two plain bearing shells(19) made of extremely hard wear-resistant materials. The bearing shells form a first pressure reducing stage to which in the axial direction is connected a return device(21) directing the leakage from this first stage of sealing back into the supply circuit of the pump. A second stage(22) of sealing is located behind the first and is in the form of a simple lip seal and/or an axial face seal. An Independent claim is included for a screw pump in which the return device(21) is connected to the fluid feedback line(14).

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

IPC 8 full level  
**F04C 2/16** (2006.01); **F04C 15/00** (2006.01); **F16J 15/32** (2006.01)

CPC (source: EP US)  
**F04C 15/0038** (2013.01 - EP US)

Cited by  
DE202017107379U1; WO2008116590A1; DE102017221847A1

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

DOCDB simple family (publication)  
**EP 0955466 A1 19991110**; **EP 0955466 B1 20021218**; AT E230070 T1 20030115; BR 9902040 A 20000222; CA 2262849 A1 19991011; CA 2262849 C 20041130; CN 1131377 C 20031217; CN 1232142 A 19991020; DE 59806719 D1 20030130; DK 0955466 T3 20030303; ES 2187848 T3 20030616; JP 4152513 B2 20080917; JP H11303772 A 19991102; KR 100527525 B1 20051109; KR 19990082721 A 19991125; NO 323251 B1 20070212; NO 990860 D0 19990223; NO 990860 L 19991012; RU 2218480 C2 20031210; US 6129533 A 20001010

DOCDB simple family (application)  
**EP 98106690 A 19980411**; AT 98106690 T 19980411; BR 9902040 A 19990412; CA 2262849 A 19990223; CN 99105562 A 19990412; DE 59806719 T 19980411; DK 98106690 T 19980411; ES 98106690 T 19980411; JP 493399 A 19990112; KR 19990008053 A 19990311; NO 990860 A 19990223; RU 98123617 A 19981228; US 27216799 A 19990318