

12

EUROPEAN PATENT APPLICATION

21 Application number: 90300894.4

51 Int. Cl.⁵: **F04C 2/107, F04C 5/00**

22 Date of filing: 29.01.90

30 Priority: 01.02.89 GB 8902230

43 Date of publication of application:
08.08.90 Bulletin 90/32

84 Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

88 Date of deferred publication of the search report:
05.12.90 Bulletin 90/49

71 Applicant: **MONO PUMPS LIMITED**
P.O. Box 14, Martin Street
Audenshaw, Manchester M34 5DQ(GB)

72 Inventor: **Mathewson, Lindsay Thomas**
21 Macclesfield Road
Buxton, Derbyshire(GB)
Inventor: **May, Geoffrey Harold**
5/6 Bury Road
Rochdale, Lancashire OL11 4DN(GB)

74 Representative: **Allen, William Guy Fairfax et al**
J.A. KEMP & CO. 14 South Square Gray's Inn
London WC1R 5EU(GB)

54 **Helical gear pump.**

57 A helical gear pump is described in which the geometry of the stator (8) and rotor (22) are modified such that the interference is significantly more at the locations of the minor diameter d than the locations of the major diameter D of the rotor. The rotor (22) is preferably plasma coated with modified chromium oxide and the base metal of the rotor is advantageously machined so that in the region of locations

of major diameter D , the thickness of the plasma coating (28) is less and, in the region of the locations of minor diameter d , the thickness of the plasma coating (28) is greater than in the remainder of the rotor (22) while allowing the interference to be significantly more at the locations of the minor diameter d than at the locations of the major diameter D .

Fig. 1A.

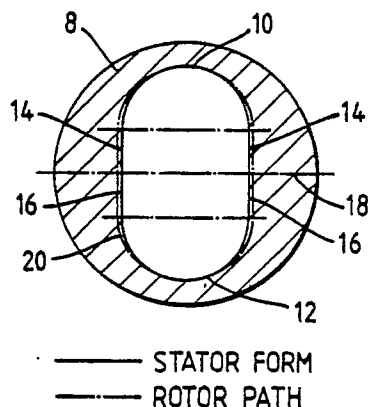
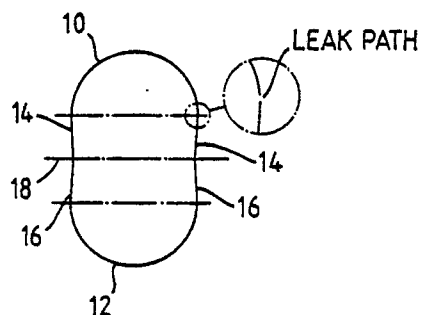


Fig. 1B.





DOCUMENTS CONSIDERED TO BE RELEVANT			EP 90300894.4
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	<u>GB - A - 1 542 786</u> (SOCIETE GENERALE DE MECANIQUE ET DE METALLURGIE S.A.) * Totality; especially fig. 2 *	1	F 04 C 2/107 F 04 C 5/00
A	-- <u>DE - B2 - 2 017 620</u> (GUMMI-JÄGER) * Totality *	1	
D,A	-- <u>US - A - 4 773 834</u> (SARUWATARI) * Totality *	1	
A	-- <u>DE - A - 1 553 146</u> (NETZSCH) * Totality *	1-3	
A	-- <u>DE - A - 1 553 148</u> (NETZSCH) * Totality *	1-3	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			F 01 C 1/00 F 04 C 2/00 F 04 C 5/00 F 04 C 18/00
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
VIENNA	05-10-1990	WERDECKER	
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document			