

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

200001705-3 (1993 copy)



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : F04F 11/02, F15B 3/00, F15D 1/14		A1	(11) International Publication Number: WO 99/17028
			(43) International Publication Date: 8 April 1999 (08.04.99)
(21) International Application Number: PCT/NO98/00290		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 30 September 1998 (30.09.98)			
(30) Priority Data: 974542 1 October 1997 (01.10.97) NO			
(71)(72) Applicant and Inventor: HAUGE, Leif, J. [NO/US]; P.O. Box 65157, Virginia Beach, VA 23467-5157 (US).			
(74) Agent: ONSAGERS PATENTKONTOR - DEFENSOR A/S; Sentrum, P.O. Box 265, N-0103 Oslo (NO).		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	

(54) Title: PRESSURE EXCHANGER

(57) Abstract

A pressure exchanger for transferring pressure energy from one fluid flow to a second where two end covers (13, 14), a rotor (11) and a rotor liner (12) are mounted together via a centre bolt (10) in a pressure housing (1) in order to reduce elastic deformations, essentially tensile stress, and to protect the pressure exchanger against impact or shock. One end cover (13) is arranged for inlet of fluid at high pressure and outlet of the same fluid depressurized in a corresponding end cover (14) via a central course in the rotor. The second end cover (14) has in addition an inlet for fluid at low pressure and an outlet for the same fluid under high pressure. A base (2) which is attached with lease pins at the bottom of the pressure housing (1) has external connections (3, 4) and internal passages, which are connected with the inlet (24) of fluid at low pressure together with the outlet (23) for depressurized fluid in the end cover (14). A sealing ring (28) prevents the mixing of in and outgoing fluid at high pressure which is passed through the pressure housing's wall via external pipe couplings (5, 7). The pressure housing (1) has a top cover (8) which is attached via a multi-sectional locking ring (18) inserted in an internal groove in the pressure housing by means of the locking cover (20).

