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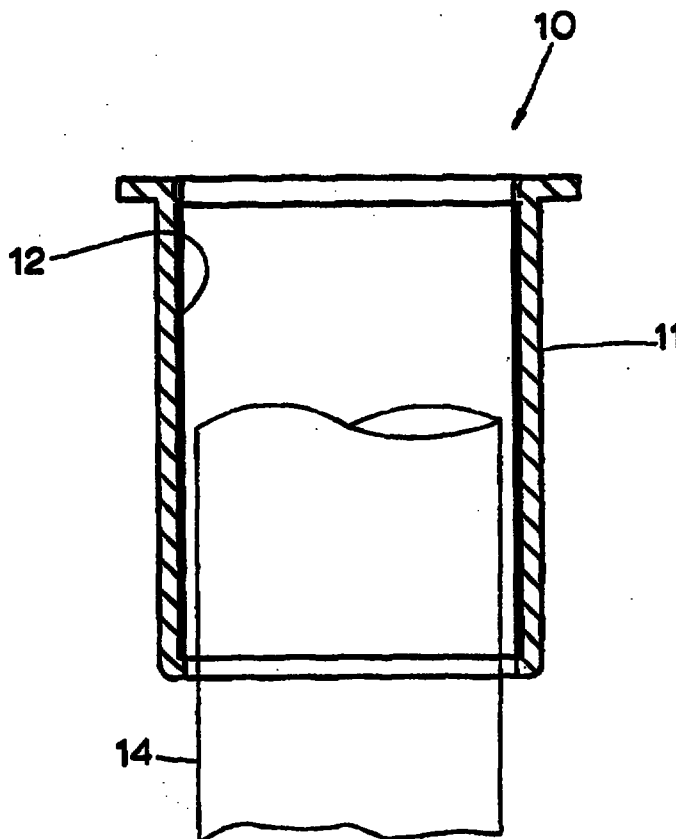
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : / F16C 33/20		A1	(11) International Publication Number: / WO 95/35451 ✓ (43) International Publication Date: 28 December 1995 (28.12.95)
(21) International Application Number: / PCT/US95/07778 ✓ (22) International Filing Date: 19 June 1995 (19.06.95) (30) Priority Data: / 08/262,940 / 21 June 1994 (21.06.94) US (71) Applicant: FISHER CONTROLS INTERNATIONAL, INC. [US/US]; 8000 Maryland Avenue, Clayton, MO 63105 (US). (72) Inventor: WILSON, Robert, T.; 1009 Fremont Street, Marshalltown, IA 50158 (US). (74) Agent: SCARPELLI, Nate, F.; Marshall, O'Toole, Gerstein, Murray & Borun, 6300 Sears Tower, 233 South Wacker Drive, Chicago, IL 60606-6402 (US).		(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG). 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. SG copy	

(54) Title: / PEEK BEARING WITH TRAPPED PTFE BEARING LINER

(57) Abstract

A sleeve bearing (10) for use on rotary valve shafts (14) subjected to substantial operating pressures sufficient to extrude PTFE includes a cylindrical non-metallic bearing jacket (11), preferably composed from PEEK. The bearing jacket has a cylindrical inner cavity (20) defined between opposite annular cavity end lips (22, 24) within which cavity is disposed a cylindrical PTFE liner (12). The annular cavity end lips on the inner surface of the cylindrical nonmetallic bearing jacket extend inwardly to an end lip surface wherein the diameter of said end lip surface is slightly longer than the diameter of the rotary shaft (14) of the control valve. A suitable adhesive is used to bond the liner (12) to the bearing jacket (11). The cavity end lips maintain the liner in position if the adhesive fails. The end lip construction and the close clearances between the end lips and the rotary shaft enable the PTFE liner to carry greater load than in other PTFE bearing constructions before beginning to extrude PTFE. After the PTFE liner begins to extrude PTFE, the close clearances ensure that any overloaded PTFE is maintained within the cavity (20) of the nonmetallic bearing jacket.



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