



(51) International Patent Classification:
F16K 3/04 (2006.01) *F16K 3/10* (2006.01)

(21) International Application Number:
PCT/US2011/051882

(22) International Filing Date:
16 September 2011 (16.09.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/383,428 16 September 2010 (16.09.2010) US

(71) Applicant (for all designated States except US): **TYCO VALVES & CONTROLS LP** [US/US]; 10707 Clay Road, Houston, TX 77041 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **NGUYEN, Viet** [US/US]; 13520 Rim Rock Drive, Reno, NV 89521 (US).

(74) Agent: **RAJ, Rasmi**; Tyco Valves & Controls LP, 9 Roszel Road, Princeton, NJ 08540 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,

[Continued on next page]

(54) Title: SLEEVE SEAL FOR GATE VALVES

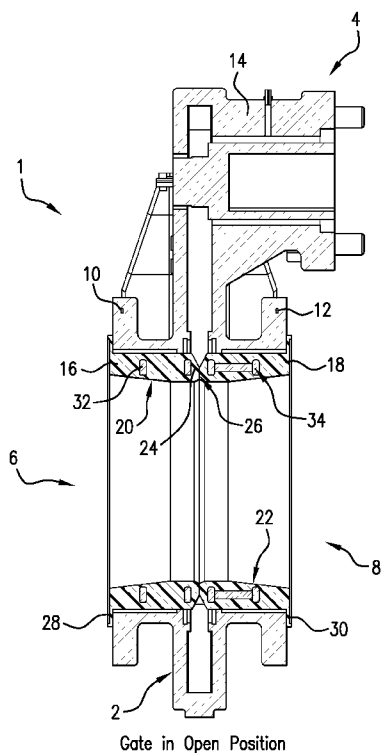


FIG. 1

(57) Abstract: A gate valve sleeve including a reinforced elastomeric valve sleeve member with an integrally molded reinforcing member disposed therein. In one embodiment, the reinforcing member comprises a pair of parallel spaced ring elements connected by a plurality of spacers. In another embodiment, the reinforcing member comprises first and second ring member abutted to form a T-shape. In a further embodiment, the reinforcing member comprises a ring and a plurality of axially oriented spacer members. In yet a further embodiment, the reinforcing member comprises a pair of ring elements connected by a plurality of pins. The pins are fixed to one of the ring elements and are slidably engageable with the other ring element. In an alternate embodiment, an auxiliary ring member is located within an interior opening of the reinforcing member.



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*