



- (51) International Patent Classification:
C09K 8/508 (2006.01) *E21B 33/122* (2006.01)
- (21) International Application Number:
PCT/US2013/030550
- (22) International Filing Date:
12 March 2013 (12.03.2013)
- (25) Filing Language: English
- (26) Publication Language: English
- (71) Applicant: **HALLIBURTON ENERGY SERVICES, INC.** [US/US]; 10200 Bellaire Blvd., Houston, Texas 77072 (US).
- (72) Inventors: **WIGGINS, Matthew Hassett**; 47 N. Bacopa Drive, Spring, Texas 77389 (US). **GRACE, Christopher Alan**; 245 Tanbark Circle, Coppell, Texas 75019 (US).
- (74) Agent: **RIPPAMONTI, Russell N.**; Fish & Richardson P.C., P. O. Box 1022, Minneapolis, Minnesota 55440-1022 (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, BN, 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, PA, 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, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: FIBER REINFORCED SEALING ELEMENT

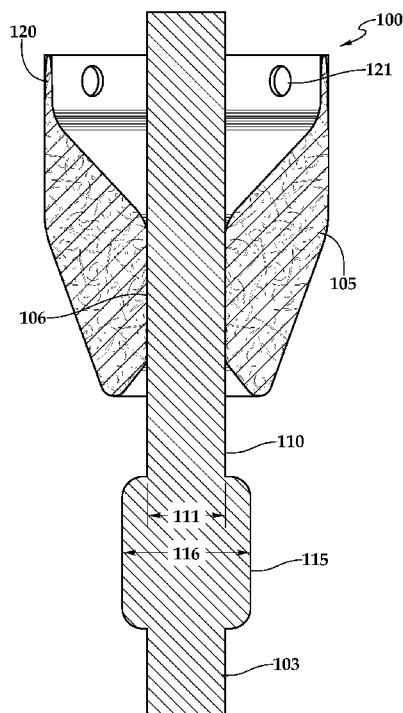


Fig.1

(57) Abstract: A method for making a sealing element for a rotating control device used in rotary drilling systems is disclosed. The sealing element has a bore, a base region, and a nose region. The method comprises providing a mold for the sealing element for the rotating control device, adding fibers at a first concentration to a first liquid elastomer material containing polyurethane, placing the first liquid elastomer material having a first concentration of fibers into the mold, adding fibers at a second concentration to a second liquid elastomer material containing polyurethane, placing the second liquid elastomer material having a second concentration of fibers into the mold, heating the fibers and liquid elastomer in the mold, and forming a sealing element having a bore, a base region with a first concentration of fibers, and a nose region having a second concentration of fibers.



Published:

— *with international search report (Art. 21(3))*