



- | | |
|--|--|
| <p>(51) International Patent Classification:
 <i>E21B 34/14</i> (2006.01) <i>E21B 34/10</i> (2006.01)
 <i>E21B 34/08</i> (2006.01)</p> | <p>(SG). KHOR, Cheng, Xiang, Adrian; 11 Tuas South Avenue 12, Singapore 637131 (SG).</p> |
| <p>(21) International Application Number:
 PCT/US2023/085949</p> | <p>(74) Agent: TEAKELL, Scott, M. et al.; c/o Barnes & Thornburg, LLP, One North Wacker Drive, Suite 4400, Chicago, IL 60606-2833 (US).</p> |
| <p>(22) International Filing Date:
 26 December 2023 (26.12.2023)</p> | <p>(81) Designated States (<i>unless otherwise indicated, for every kind of national protection available</i>): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.</p> |
| <p>(25) Filing Language: English</p> | |
| <p>(26) Publication Language: English</p> | |
| <p>(30) Priority Data:
 18/537,795 12 December 2023 (12.12.2023) US</p> | |
| <p>(71) Applicant: HALLIBURTON ENERGY SERVICES, INC. [US/US]; 3000 N. Sam Houston Parkway E, Houston, TX 77032-3219 (US).</p> | |
| <p>(72) Inventors: DAVE, Jalpan, Piyush; 11 Tuas South Ave 12, Singapore 637131 (SG). GUNASEKARAN, Mohan; 11 Tuas South Ave 12, Singapore 637131 (SG). FRIPP, Michael, Linley; 11 Tuas South Ave 12, Singapore 637131</p> | |
| | <p>(84) Designated States (<i>unless otherwise indicated, for every kind of regional protection available</i>): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,</p> |

(54) Title: TUBING AND CONTROL LINE HYDROSTATIC-INSENSITIVE SINGLE CONTROL LINE SAFETY VALVE

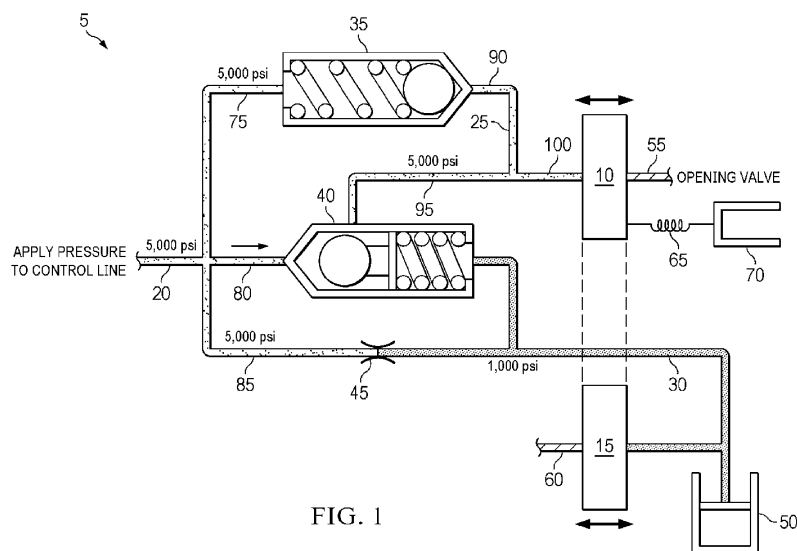


FIG. 1

(57) Abstract: Safety valves and methods of using safety valves. The safety valve is provided to a wellbore having a hydrostatic pressure. The safety valve is configured to operate at tubing well pressure. Pressure is applied to the safety valve with a single control line. The safety valve uses an accumulator in fluidic communication with the control line such that pressure acting on the accumulator is fluidically connected to pressure in the control line. The safety valve is insensitive to the hydrostatic pressure.

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, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

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