

(51) International Patent Classification:
E21B 43/12 (2006.01)(21) International Application Number:
PCT/US2013/040197(22) International Filing Date:
8 May 2013 (08.05.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/555,012 20 July 2012 (20.07.2012) US

(71) Applicant: CAMERON INTERNATIONAL CORPORATION [US/US]; 1333 West Loop South, Suite 1700, Houston, Texas 77027 (US).

(72) Inventors: MCKEON, Michael Anthony; Cameron Ireland Ltd., Aghafad, Longford (IE). ELLIOTT, Declan; Cameron Ireland Ltd., Aghafad, Longford (IE). EVANS, Finbarr Williams; Cameron Ireland Ltd., Aghafad, Longford (IE).

(74) Agents: SWANSON, Tait R. et al.; P.O. Box 692289, Houston, Texas 77269 (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).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: FLOW CONTROL SYSTEM WITH INTERCHANGEABLE ACTUATORS

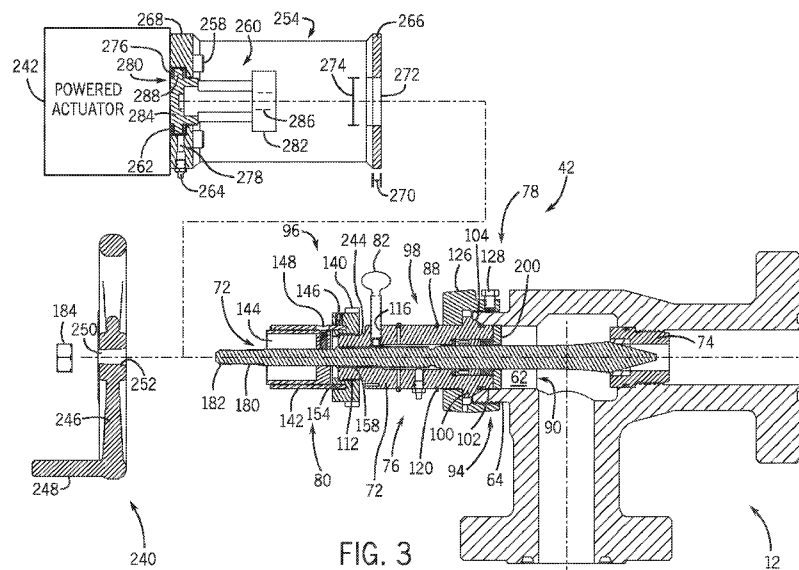


FIG. 3

(57) Abstract: A system, including a wellhead system, and a flow control system coupled to the wellhead system, wherein the flow control system comprises, a flow control device including a housing, a flow path through the housing from an inlet to an outlet, and a flow control element disposed in the housing along the flow path, and an actuator mounting assembly coupled to the flow control device, wherein the actuator mounting assembly is configured to selectively mount one of a manual actuator and a powered actuator to actuate the flow control element of the flow control device, without taking the flow control system offline.



Published:

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