



(51) International Patent Classification:
E21B 33/06 (2006.01)

(21) International Application Number:
PCT/US2011/026510

(22) International Filing Date:
28 February 2011 (28.02.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/775,414 6 May 2010 (06.05.2010) US

(71) Applicant (for all designated States except US):
CAMERON INTERNATIONAL CORPORATION
[US/US]; 1333 W Loop South, Suite 1700, Houston,
Texas 77027 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **KOTRLA, Johnnie**
[US/US]; 1143 Flagmore Drive, Katy, Texas 77450 (US).

(74) Agent: **SWANSON, Tait R.**; P.O. Box 692289, Houston,
Texas 77269-2289 (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, RO, RS, RU, 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,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

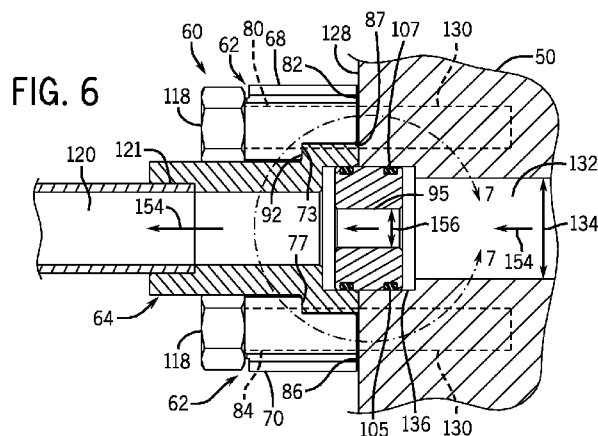
Declarations under Rule 4.17:

- 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))

Published:

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

(54) Title: TUNABLE FLOATING SEAL INSERT



(57) Abstract: A system comprising, a mineral extraction component, a conduit fitting coupled to the mineral extraction component, a floating seal insert disposed in the conduit fitting. The floating seal insert comprises a feature configured to tune a fluid dynamic characteristic along a liquid flow path through the conduit fitting and the floating seal insert. Furthermore, the fluid dynamic characteristic can be shockwaves, flow rate, turbulence, etc.