



(51) International Patent Classification:

F16L 43/00 (2006.01) *F16L 57/06* (2006.01)
F16L 39/00 (2006.01) *F16L 9/18* (2006.01)
F16L 49/00 (2006.01) *F17D 5/00* (2006.01)
F16L 55/00 (2006.01)

(21) International Application Number:

PCT/CA2013/050695

(22) International Filing Date:

10 September 2013 (10.09.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/720,554 19 December 2012 (19.12.2012) US

(71) Applicant: **SPECIALIZED DESANDERS INC.**
[CA/CA]; Suite 106, 10615 - 48th Street SW, Calgary, Al-
berta T2C 2B7 (CA).

(72) Inventor: **HEMSTOCK, Christopher**; 34 Cranridge
Heights SE, Calgary, Alberta T3M 0E7 (CA).

(74) Agent: **GOODWIN MCKAY**; Suite 222, Parkside Place,
602 - 12th Avenue SW, Calgary, Alberta T2R 1J3 (CA).

(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, 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, SA,
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.

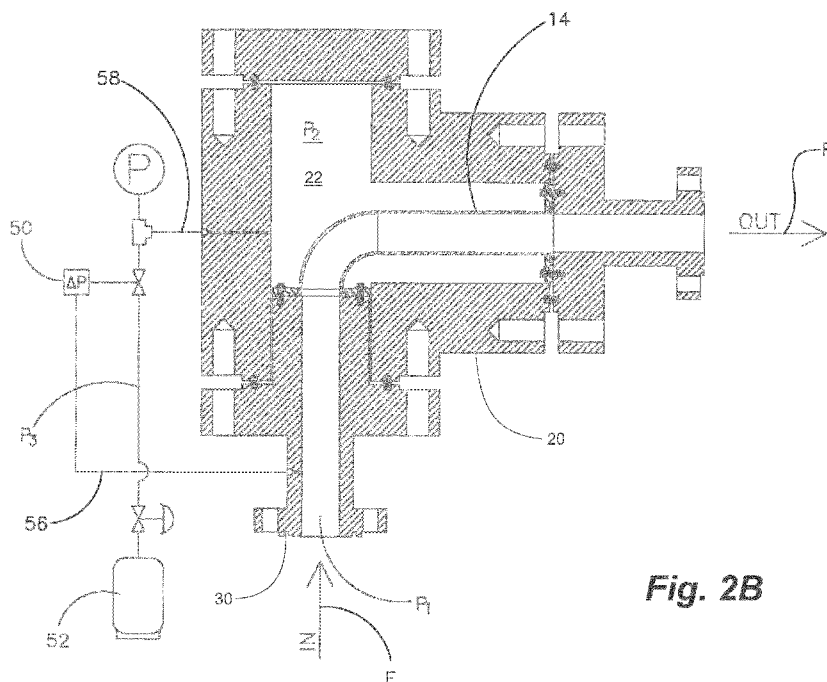
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,
UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, 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,
KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: EROSION RESISTANT FLOW CONDUIT



(57) Abstract: A particulate-accommodating fluid flow directing apparatus comprises a failure detection housing containing a flow directing insert, the housing serving as a pressure boundary; failure at any location along the insert being detectable by means associated with the housing. The insert can be manufactured of erosion resistant materials, including non-ductile materials such as ceramics. The insert is sealed to the housing at an inlet and a discharge forming a pressure chamber between the insert and housing. The pressure chamber can be maintained at a pad pressure complementary to the process pressure, the pad pressure being maintained and monitored for indication of insert failure.

Fig. 2B



Published:

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

— *with amended claims (Art. 19(1))*