

(51) International Patent Classification:
G01N 15/08 (2006.01) *G01F 1/36* (2006.01)(21) International Application Number:
PCT/US2008/077649(22) International Filing Date:
25 September 2008 (25.09.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/864,133 28 September 2007 (28.09.2007) US(71) Applicant (for all designated States except US): **CIRCOR INSTRUMENTATION TECHNOLOGIES, INC.** [US/US]; 405 Centura Court, Spartanburg, South Carolina 29303 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **LOWERY, Patrick, A.** [US/US]; 105 Breton Drive, Greer, South Carolina 29650 (US).(74) Agents: **O'BRIAN, K. Scott** et al.; McNeese Wallace & Nurick, LLC, 100 Pine Street, P.O. Box 1166, Harrisburg, Pennsylvania 17108-1166 (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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI

[Continued on next page]

(54) Title: FILTER MONITOR-FLOW METER COMBINATION SENSOR

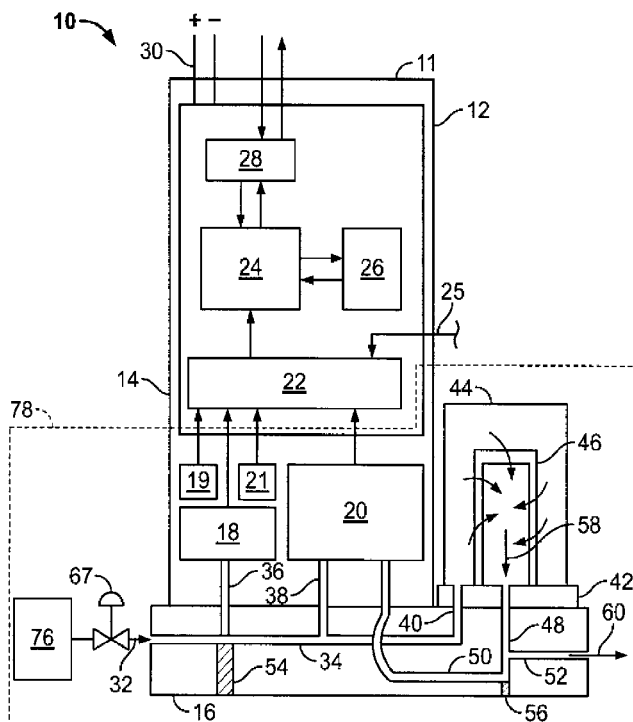


FIG. 1

(57) Abstract: A method for monitoring a filter installed in a fluid system. The steps include providing a reference region in the fluid system, the region including a chamber having a known volume and releasing a fluid from the chamber configured to flow through the reference region. The method further includes measuring pressure and temperature values at predetermined locations at predetermined time intervals and determining filter permeability values in response to measured pressure and temperature values. The method further includes comparing the filter permeability values to predetermined filter permeability values.

(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

Published:

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

(88) Date of publication of the international search report:

17 December 2009