



(51) International Patent Classification:
G01H 9/00 (2006.01)

(21) International Application Number:

PCT/US2012/024081

(22) International Filing Date:

7 February 2012 (07.02.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/024,496	10 February 2011 (10.02.2011)	US
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(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, 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, 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, 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).

Published:

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

[Continued on next page]

(54) Title: METHOD FOR MONITORING THE CONDITION OF A VIBRATION SENSOR

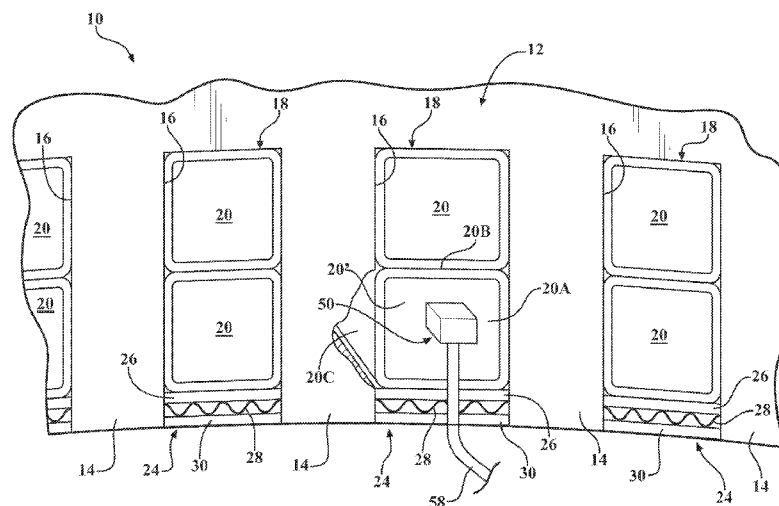


FIG. 1

(57) Abstract: A system and method for monitoring the condition of a vibration sensor (50) in a system. Vibrations are received in the system at one or more vibration sensors. Sensor data is output by the vibration sensor(s). The sensor data includes data representative of the vibrations in the system and data representative of a natural frequency of the corresponding vibration sensor. The sensor data output from the vibration sensor(s) is monitored, and upon a change in the data representative of the natural frequency of a vibration sensor, that vibration sensor is flagged.



— *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))*

(88) Date of publication of the international search report:
14 February 2013

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/024081

A. CLASSIFICATION OF SUBJECT MATTER
INV. G01H13/00
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G01H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 146 776 A (TWERDOCHLIB MICHAEL [US] ET AL) 15 September 1992 (1992-09-15) abstract; claims 1,3,8,9; figures 1-5 column 2, line 50 - column 3, line 28 column 3, lines 52-59 column 4, lines 12-15 column 4, lines 46-52 -----	1-18



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

30 November 2012

Date of mailing of the international search report

17/12/2012

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/024081

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 5146776	A	15-09-1992	JP	1882211 C		10-11-1994
			JP	4268420 A		24-09-1992
			JP	6012296 B		16-02-1994
			US	5146776 A		15-09-1992
