



(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



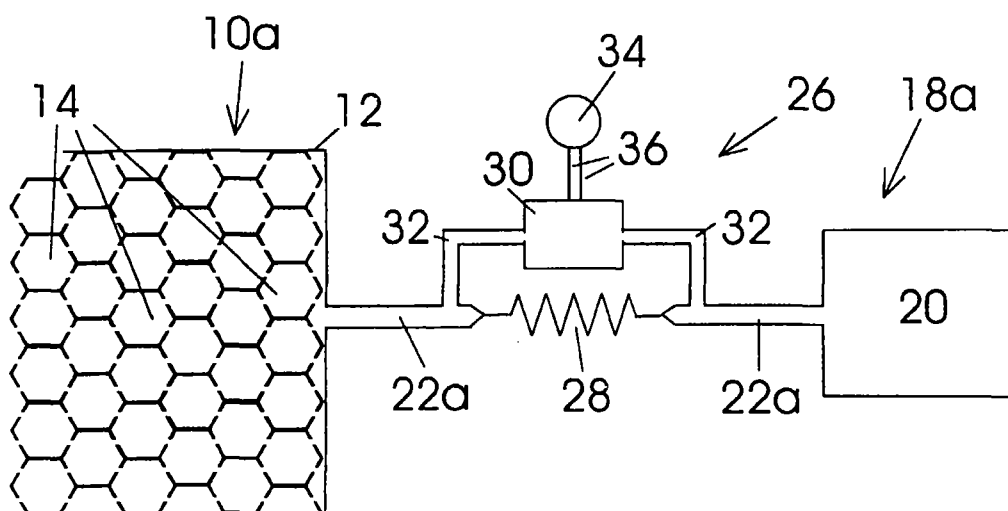
(43) International Publication Date
14 March 2002 (14.03.2002)

PCT

(10) International Publication Number
WO 02/21096 A1

- (51) International Patent Classification⁷: G01M 3/32, (74) Agent: MIZZI, Anthony, Paul; 256 Adelaide Terrace, Perth, Western Australia 6000 (AU).
3/26, G01N 19/08, 7/10
- (21) International Application Number: PCT/AU01/00739 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (22) International Filing Date: 2 July 2001 (02.07.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: PR 0018 8 September 2000 (08.09.2000) AU (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
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- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR MONITORING THE INTEGRITY OF COMPONENTS AND STRUCTURES



(57) Abstract: A method and apparatus provided for monitoring the integrity of a structure (10) disposed in an environment containing a fluid (F) at an ambient pressure. The structure (10) includes a skin (12) and a plurality of internal cavities (14). The method involves applying a further fluid to the cavities (14), the applied fluid being at a pressure which is marginally greater than the atmospheric ambient pressure (F). The flow rate of the applied fluid is monitored for detection in a change in the flow rate. The change in flow rate is indicative of additional fluid seepage through the structure (10) providing advance warning of a failure in the integrity of the structure (10). Monitoring is achieved by passing the applied fluid through a high fluid flow impedance (28) and monitoring for a change in pressure across the impedance (28) using a transducer (30).

