



(51) International Patent Classification:
E21B 41/00 (2006.01)

(21) International Application Number:
PCT/GB2011/051377

(22) International Filing Date:
20 July 2011 (20.07.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1012175.4 20 July 2010 (20.07.2010) GB

(71) Applicant (for all designated States except US):
METROL TECHNOLOGY LIMITED [GB/GB]; Unit
24, Kirkhill Place, Dyce, Aberdeen, Aberdeenshire AB21
0GU (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **ROSS, Shaun
Compton** [GB/GB]; West Cults House, 493 North Dee-
side Road, Aberdeen, Aberdeenshire AB15 9ES (GB).

JARVIS, Leslie David [GB/GB]; Marielot, Netherley,
Stonehaven, Aberdeen, Aberdeenshire AB39 3QL (GB).

(74) Agent: **WATSON, Craig**; 165-169 Scotland Street, Glas-
gow, Strathclyde G5 8PL (GB).

(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,

[Continued on next page]

(54) Title: A SAFETY MECHANISM FOR A WELL, A WELL COMPRISING THE SAFETY MECHANISM, AND RELATED METHODS

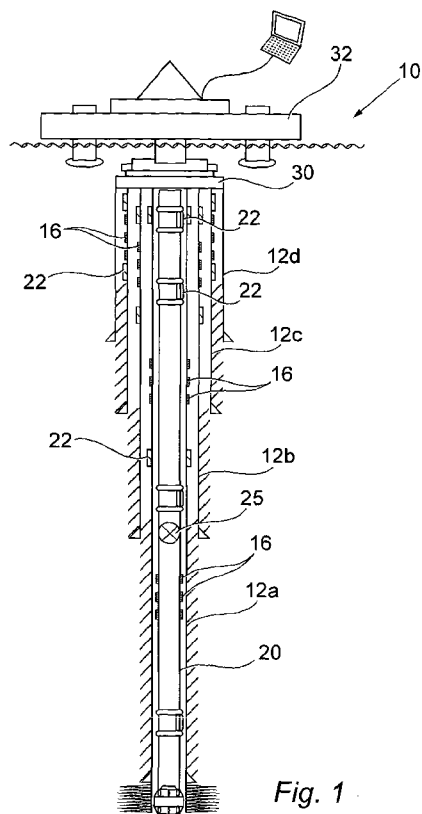


Fig. 1

(57) Abstract: A safety mechanism comprising: an obstructing member moveable between a first position where fluid flow is permitted, and a second position where fluid flow is restricted preferably blocked; a movement mechanism; and a wireless receiver, often an acoustic transceiver, adapted to receive a wireless signal; wherein the movement mechanism is operable to move the obstructing member from one of the first and second positions to the other of the first and second positions in response to a change in the signal being received by the wireless receiver. Embodiments of the invention thus provide a safety mechanism for a well such as a valve, packer, plug or sleeve, which can be operated wirelessly and so may allow operation of safety mechanisms in a well even when emergency situations have occurred.



LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, **Published:**

SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,

GW, ML, MR, NE, SN, TD, TG).

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