



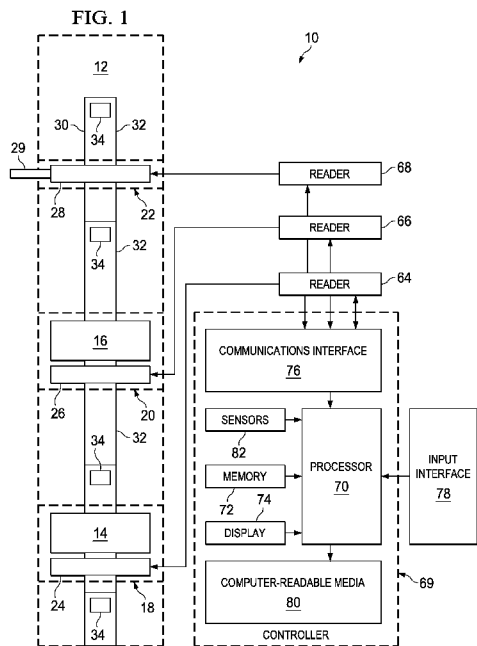
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[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR TRACKING PIPE ACTIVITY ON A RIG



(57) Abstract: A system for tracking pipe activity on a rig includes a plurality of pipes, each pipe having an asset ID tag containing a code unique to the pipe. A pipe handling space for assembling and disassembling the pipes contains at least one pipe handling apparatus. A first scanning zone located at a first position in the pipe handling space contains a first reader antenna. A second scanning zone located at a second position in the pipe handling space contains a second reader antenna. At least one reader is provided for scanning the asset ID tags in the pipe handling space through at least one of the first reader antenna and the second reader antenna.

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— *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))*

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/025572

| A. CLASSIFICATION OF SUBJECT MATTER INV. E21B17/00 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) E21B | | |
| 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 | WO 2011/017280 A1 (CAMERON INT CORP [US]; BAXTER DANIEL BRENT [US]; HISCOX MY-LAN THI [US] 10 February 2011 (2011-02-10) paragraphs [0023], [0025], [0027] - [0029], [0032], [0034], [0035]; figures 1,2 ----- | 1-18 |
| X | US 4 698 631 A (KELLY JR JOSEPH L [US] ET AL) 6 October 1987 (1987-10-06) column 2, line 67 - column 3, line 23 column 3, line 62 - column 4, line 14 pages 1-3 ----- | 1-18 |
| X | US 2009/205820 A1 (KOEDERITZ WILLIAM L [US] ET AL) 20 August 2009 (2009-08-20) paragraphs [0149], [0152]; figure 5C ----- -/-- | 1-18 |
| <input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex. | | |
| * Special categories of cited documents : | | |
| "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed | | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family |
| Date of the actual completion of the international search 22 March 2013 | | Date of mailing of the international search report 10/06/2013 |
| Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016 | | Authorized officer Schneiderbauer, K |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/025572

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

see additional sheet(s)

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/025572

| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|--|---|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| X | WO 2011/017278 A1 (CAMERON INT CORP [US]; BAXTER DANIEL BRENT [US]; SMITH TERRY JASON [US] 10 February 2011 (2011-02-10) paragraphs [0028] - [0031], [0058], [0061], [0062]; figure 10 ----- | 1-18 |
| X | US 2009/121895 A1 (DENNY LAWRENCE A [US] ET AL) 14 May 2009 (2009-05-14) paragraphs [0051], [0090] - [0093]; figures 11,19 ----- | 1-18 |
| A | US 2007/124220 A1 (GRIGGS PAUL S [US] ET AL) 31 May 2007 (2007-05-31) paragraphs [0010], [0011], [0033], [0034]; figures 4,5 ----- | 1-18 |
| A | US 2010/039280 A1 (HOLM HENRIK [US] ET AL) 18 February 2010 (2010-02-18) paragraphs [0002], [0006], [0020]; figure 1 ----- | 1-18 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

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|---|
| International application No PCT/US2012/025572 |
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| Patent document cited in search report | Publication date | Patent family member(s) | Publication date | |
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| | | | | |
| US 2010039280 | A1 | 18-02-2010 | NONE | |
| | | | | |

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-18

A first and second scanning zone at first and second position in the pipe handling space with first and second reader antennas and a reader for scanning the asset tags through these two antennas.

2. claims: 19-24

In addition to the common concept invention II defines the features of attaching a pipe stand to a drill string , lowering the drill string through a drill floor into a well and using the reading obtained via the scanning to determine an asset composition of the pipe stand, the asset composition indicating a string of pipes in the pipe stand and updating an activity record of one or more of the pipes in the pipe stand.

3. claims: 25-30

In addition to the common concept (under 1.1 and 1.2) invention III defines the features of the positions of the first and the second tag reader antenna, proximate a drill floor and farther from the drill floor and the feature that the first reader antenna is separated from the second reader antenna by a distance that is a function of distance of separation between two tags attached to the tubular and wherein each of the antenna comprises a plurality of sections, each section radially movable with respect to a longitudinal axis of the tubular.
