



- (51) International Patent Classification:
F16L 1/16 (2006.01) B25J 1/06 (2006.01)
F16L 1/26 (2006.01)
- (21) International Application Number:
PCT/US2012/024468
- (22) International Filing Date:
9 February 2012 (09.02.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
13/075,964 30 March 2011 (30.03.2011) 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, 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, 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.

[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR REPOSITIONING AND REPAIRING A SECTION OF SUBSEA PIPE LOCATED ON A SEABED

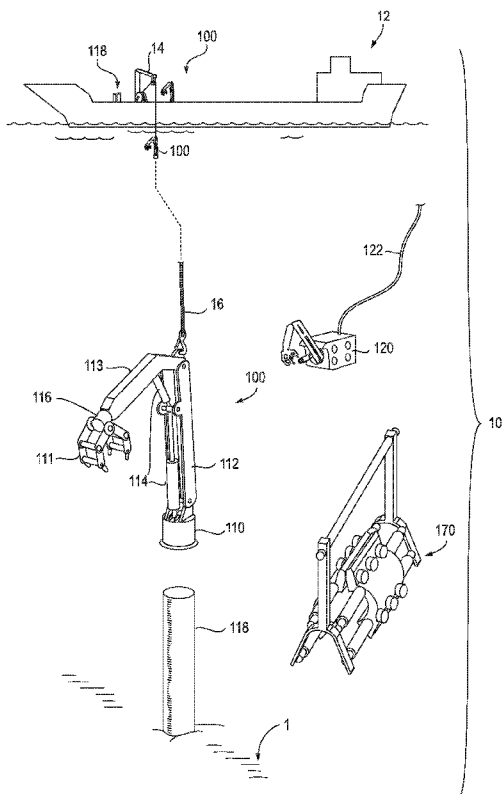


FIG. 1

(57) Abstract: Methods and systems are provided for repositioning and/or repairing a section of pipe within a pipeline or other equipment located on a seabed. System components are delivered by a surface vessel to the vicinity of the section of pipe or other equipment. Piles are partially driven into the seabed adjacent the section of pipe or other equipment such that each of the piles has an exposed pile top above the seabed. Pile tops are employed to support load-bearing manipulator assemblies each having a hydraulically controlled manipulator arm having a grapple capable of grasping and repositioning a section of pipe or other equipment. The manipulator assemblies are operated to reposition the pipe or other equipment in one embodiment, and to hold the pipe so that a repair clamp can be installed.

WO 2012/134640 A3

- (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).
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*
- Published:**
- *with international search report (Art. 21(3))*
- (88) Date of publication of the international search report:**
31 January 2013

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

A. CLASSIFICATION OF SUBJECT MATTER*F16L 1/16(2006.01)i, F16L 1/26(2006.01)i, B25J 1/06(2006.01)i*

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)

F16L 1/16; F16L 1/00; B23P 19/04; B63B 21/27; H01R 33/00; E02D 5/74

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: pile, base, manipulator, proximal, distal, arm, grapple, and clamp

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7635239 B2 (KINTON LAWLER) 22 December 2009	1,2,5
Y	See column 1, lines 10-25, column 2, lines 7-43 and figures 13a-13d.	3,4
Y	US 04705331 A (JAMES N. BRITTON) 10 November 1987	3,4
A	See column 15, lines 14-42, claim 1 and figures 19, 20.	1,2,5
A	US 6719496 B1 (WILLIAM HENRY VON EBERSTEIN) 13 April 2004	1-5
	See column 3, line 42 - column 4, line 48, claim 1 and figures 1-21.	
A	US 04218158 A (PROSPER A. TESSON) 19 August 1980	1-5
	See column 2, line 62 - column 3, line 11 and figures 1, 2.	

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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"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

24 SEPTEMBER 2012 (24.09.2012)

Date of mailing of the international search report

25 SEPTEMBER 2012 (25.09.2012)

Name and mailing address of the ISA/KR

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Facsimile No. 82-42-472-7140

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2012/024468

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7635239 B2	22.12.2009	US 2009-0052994 A1 US 2010-0086364 A1 US 7845882 B2 WO 2009-029527 A1	26.02.2009 08.04.2010 07.12.2010 05.03.2009
US 04705331A A	10.11.1987	None	
US 6719496 B1	13.04.2004	None	
US 04218158A A	19.08.1980	US 04268190A A	19.05.1981