



- (51) International Patent Classification:
B63B 23/34 (2006.01)
- (21) International Application Number:
PCT/NO2011/000294
- (22) International Filing Date:
19 October 2011 (19.10.2011)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
20101472 19 October 2010 (19.10.2010) NO
- (71) Applicant (for all designated States except US): **INNOVA AS** [NO/NO]; P.O. Box 390 Forus, N-4067 Stavanger (NO).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **ØSTBØ, Per Erik** [NO/NO]; Skolebryggå 8A, N-4085 Hundvåg (NO). **SHARON, Ilan** [NO/NO]; Storhaug allé 2, N-4015 Stavanger (NO).
- (74) Agent: **ZACCO NORWAY AS**; P.O. Box 2003 VIKA, N-0125 Oslo (NO).
- (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.

(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))
- 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:
7 September 2012

(54) Title: AN ARRANGEMENT AND A CRANE ASSEMBLY FOR DEPLOYMENT AND/ OR RETRIEVAL OF A PAYLOAD AT SEA, AND A MOVEMENT ATTENUATION PAYLOAD DEPLOYMENT AND/ OR RETRIEVAL DEVICE, AND A SNUBBER DEVICE.

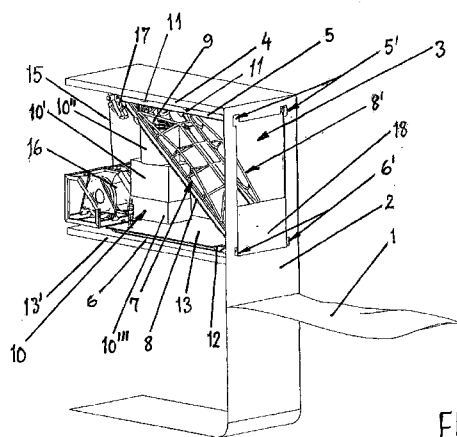


FIG. 1

(57) Abstract: An arrangement for deployment of a payload(10) from a marine structure, and/or payload retrieval onto the marine structure. The system comprises a crane assembly configured to be operatively and movably attached at an upper, first level and at a lower, second level to structures of the marine structure. The crane assembly has a) an upper part (7) which is inclined relative to the horizontal, the upper part having a first pair of longitudinal beams (8) and a reinforcing frame (8'), and an upper end of the beams being movable along a rail system related to the first level structure, b) a lower part constituted by a second pair of beams (6) or rails which at an outer end region thereof (12) are linked to an outer end region of the upper part constituted by an outer end of the first beams of the upper part; and at the inner end region thereof (12') is movable relative to said second level structure; and c) a payload deployment carriage (9) which is associated with means for gripping and/or moving the payload.



INTERNATIONAL SEARCH REPORT

International application No
PCT/N02011/000294

A. CLASSIFICATION OF SUBJECT MATTER INV. B63B23/34 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) B63B B66C		
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		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 877 262 A2 (STN ATLAS ELEKTRONIK GMBH [DE] ATLAS ELEKTRONIK GMBH [DE]) 11 November 1998 (1998-11-11) column 4, line 21 - column 5, line 7; figures 1,2 -----	1,29-31
A	US 3 034 669 A (BROWN ERNEST N) 15 May 1962 (1962-05-15) column 3, line 20 - column 5, line 70; figures "1-8 -----	1,29-31
A	GB 18840 A A.D. 1914 (TYE WALTER) 11 March 1915 (1915-03-11) pages 2,3; figure 1 -----	1,29-31
A	DE 75 36 028 U (BAUMASCHINEN KG.) 28 April 1977 (1977-04-28) pages 3,4; figure 1 -----	1,29-31
-/--		
<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 30 March 2012		Date of mailing of the international search report 19/07/2012
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 Raffaelli, Leonardo

INTERNATIONAL SEARCH REPORT

International application No

PCT/N02011/000294

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 72 22 012 U (KARL ZIMMERMANN GMBH.) 5 October 1972 (1972-10-05) pages 1-3; figure 1 -----	1,29-31

INTERNATIONAL SEARCH REPORT

International application No.
PCT/N02011/000294

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.:

1-22, 29-39

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-22, 29-39

An arrangement comprising a crane assembly, a crane hangar or framework having an upper first level structure, a ceiling or frame part, a lower second level structure a, deck or a floor, rail system comprising an upper part inclined to the horizontal and a lower part which is movable, upper drive means and lower drive means for moving the rails, a payload deployment carriage and means for gripping the payload.

2. claims: 23-28

A payload movement attenuation device comprising a carriage, a winch linked to the carriage, payload movement attenuation equipment associated with the carriage and including sensor controlled motors, yaw control means a latching device, a sheave to support the rope linking the winch to the carriage, a docking tray.

INTERNATIONAL SEARCH REPORT

International application No PCT/N02011/000294

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
EP 0877262	A2	11-11-1998	DE 19719306 A1 EP 0877262 A2	12-11-1998 11-11-1998

US 3034669	A	15-05-1962	NONE	

GB 191418840	A	11-03-1915	NONE	

DE 7536028	U	28-04-1977	NONE	

DE 7222012	U	05-10-1972	NONE	
