

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
30 August 2007 (30.08.2007)

PCT

(10) International Publication Number
WO 2007/096019 A1

(51) International Patent Classification:
B63B 21/50 (2006.01) **B63B 22/02** (2006.01)

(74) Agents: **DE VRIES, Johannes Hendrik Fokke et al.**;
Overschiestraat 180, NL-1062 XK Amsterdam (NL).

(21) International Application Number:
PCT/EP2006/070081

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(22) International Filing Date:
21 December 2006 (21.12.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
06110343.8 23 February 2006 (23.02.2006) EP
06122163.6 12 October 2006 (12.10.2006) EP

(71) Applicant (*for all designated States except US*):
BLUEWATER ENERGY SERVICES B.V. [NL/NL];
Marsstraat 33, NL-2132 HR Hoofddorp (NL).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

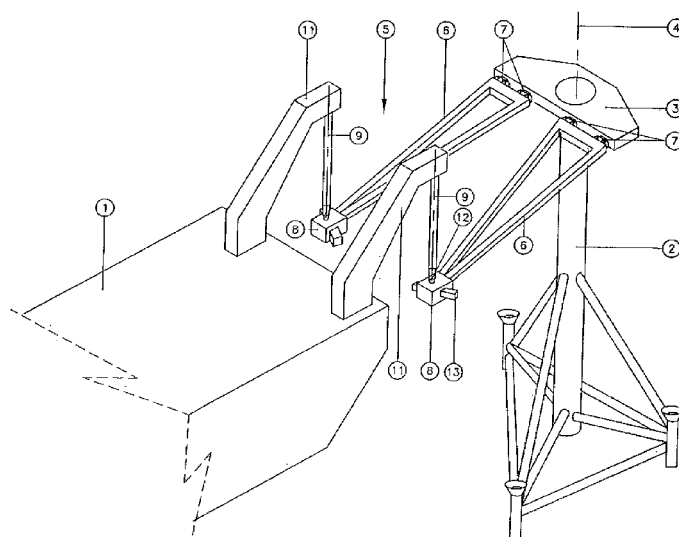
(75) Inventors/Applicants (*for US only*): **VAN DER NAT, Clemens Gerardus Johannes Maria** [NL/NL]; Zalmforelvijver 5, NL-2492 MR Den Haag (NL). **KYMMELL, Jelte Anne Willem** [—/NL]; Alexanderstraat 2-II, NL-1018 CE Amsterdam (NL).

Published:

— with international search report

[Continued on next page]

(54) Title: MOORING SYSTEM FOR A FLOATING STRUCTURE



(57) Abstract: A mooring system for a floating structure, comprising a mooring structure, such as a buoy, a further floating structure or a fixed tower. The mooring structure has a turntable rotatable around a vertical axis, and a connection structure adapted to provide a connection between the floating structure and the mooring structure. The connection structure comprises a rigid arm assembly and pendulum members, wherein the rigid arm assembly and pendulum members at one end are hingedly interconnected and at their other ends are adapted to be connected to the floating structure and the mooring structure respectively. The damping system comprises at least one liquid tank containing a liquid and being located in the mooring system at a distance from the vertical axis. The liquid tank has such dimensions that at a swinging motion of the pendulum members the liquid is adapted to move in the liquid tank to provide damping forces counteracting the swinging motion of the pendulum members.

WO 2007/096019 A1



-
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
- 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.*