(54) Title: BERTHING METHOD AND SYSTEM

(57) Abstract: A method and a system are provided for the safe berthing of marine vessels (602) in the high seas and other unprotected open waters. The invention allows a large vessel to be berthed alongside in close enough proximity to a marine structure (601) that conventional loading arm equipment may be used to load and unload the vessel under most environmental conditions. One or more floating dolphins (604, 605) moored to the bottom of the sea and provided with fendering means (607, 608) are used for berthing the vessel alongside to the marine structure. The preferred type of floating dolphin is a triangular semi-submersible moored buoyant structure comprising three buoyant column members (802), or "caissons", arranged in vertical fashion, three buoyant hull segments (803), or "pontoon", that support and separate the column members and provide heavy damping to the moored buoyant structure, and three horizontal bracing members (804) that retain the tops of the column members in place.
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.

(88) Date of publication of the international search report:
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# INTERNATIONAL SEARCH REPORT

**INTERNATIONAL APPLICATION No.**

PCT/US04/12992

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : E02B 3/26; B63B 59/02

US CL : 405/212; 114/219

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)

U.S. : 405/195.1, 212-216, 218-221, 223.1-223.4; 114/219, 220, 293, 230.1, 230.13; 441/3-5; 414/137.1

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)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
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</thead>
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<tr>
<td>X</td>
<td>WO 82/01859 A1 (BROWN) 10 June 1982 (10.06.1982), figures 1, 2 and 4; and pp. 6-8.</td>
<td>1, 2, 4-7, 10-12, 15, 16, 18-21, 24-26</td>
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<td>US 4,864,958 A (BELINSKY) 12 September 1989 (12.09.1989), figure 2; and column 2, lines 15-26.</td>
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Date of the actual completion of the international search

10 May 2005 (10.05.2005)

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19 Aug 2005

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