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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR FACILITATING HANG OFF OF MULTIPLE TOP TENSION RISER OR UMBILICALS FROM A COMPENSATED TENSIONING DECK

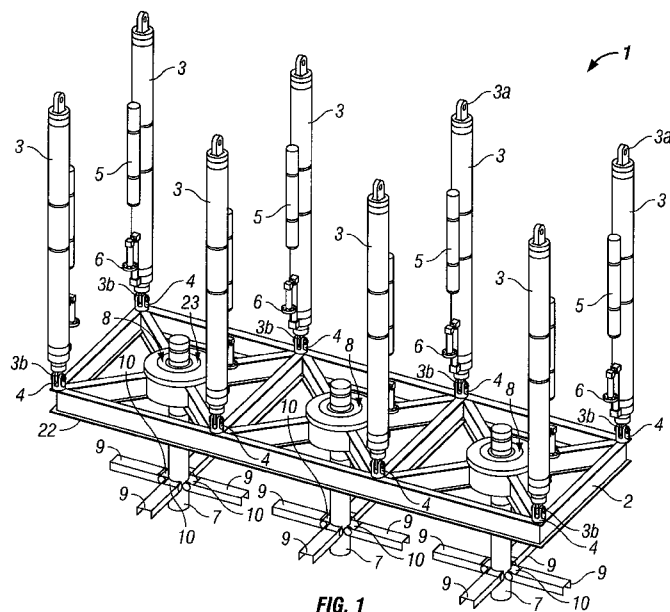


FIG. 1

(57) Abstract: The disclosure provides a deck tensioning system, supporting multiple risers, that is coupled to an offshore platform and compensated for heave and horizontal movement. Such a tensioning system provides simplified access to the production trees on the risers. The tensioning system provides tensioning for a tensioning deck to which the multiple risers are coupled, while reducing the tensioning cylinders for individual risers. The deck tensioning system further provides a simplified tension flex connector ("TFC") with an intermediate movable member for each riser. The TFC assists in absorbing and/or adjusting for forces that may cause the tensioning deck to pitch and roll from the interactions between the multiple risers coupled to the tensioning deck as a unitary structure. If a fire or other event causes damage to the tension flex connector, the tension flex connector is designed to maintain a supporting connection with the riser without the intermediate movable member.



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,
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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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.
A	US 6 691 784 B1 (WANVIK LEIV [US]) 17 February 2004 (2004-02-17) cited in the application column 6, line 26 - line 56 figures 3-5 -----	1-8
A	US 4 934 870 A (PETTY TERRY D [US] ET AL) 19 June 1990 (1990-06-19) cited in the application the whole document -----	1-8
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A	US 5 427 180 A (DEPAIVA LEITE ANDRE J [BR] ET AL) 27 June 1995 (1995-06-27) figures 1-3 -----	1-8



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INTERNATIONAL SEARCH REPORT

Information on patent family members

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