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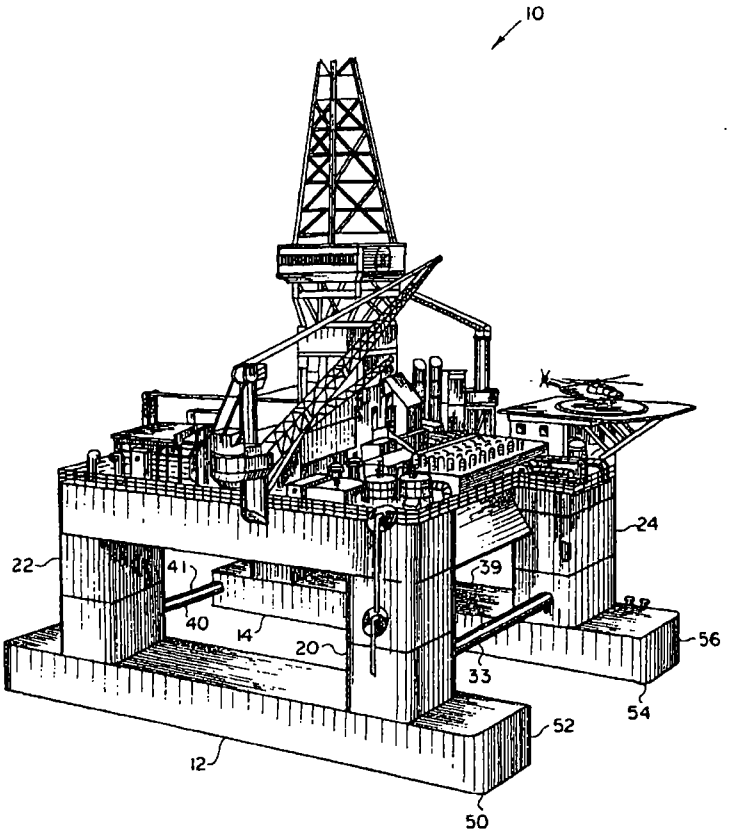
(54) Title: DYNAMICALLY POSITIONED SEMI-SUBMERSIBLE DRILLING VESSEL WITH SLENDER HORIZONTAL BRACES




(57) Abstract: The invention relates to a semi-submersible vessel designed to operate in harsh environment. The vessel has a twin-hull pontoon structure that supports four corner caissons extending vertically from the pontoons above an operational draft of the vessel. A pair of slender parallel horizontal braces connects each pair of opposing caissons, the braces extending in a general plane perpendicular to longitudinal axes of the pontoons. One of the pair of braces is secured between the forward columns and another of the pair of braces is secured between the aft columns. The braces reduce spreading and torque-induced forces acting on the columns, while not substantially increasing water plane area of the vessel. Each brace has an internal "redundancy" feature, being divided into two independent watertight compartments to continue providing buoyancy to the structure if one of the compartments is breached. Station keeping is accomplished with a full dynamically positioned system consisting of a plurality of thruster assemblies mounted on the starboard and port sides of the pontoon hull.

WO 01/56872 A1

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