SUMMARY OF THE INVENTION

An aspect of the present invention is directed to a damping apparatus for a moonpool, in which a driving mechanism of a damping plate for opening and closing the moonpool is configured very simply to thereby reduce installation cost, and interference with other articles inside the moonpool is minimized to thereby make an installation layout convenient.

According to an aspect~~embodiment~~ of the present invention, there is provided a damping apparatus for a moonpool in a ship having an enclosed derrick disposed over the moonpool, the apparatus comprising: a damping plate comprising a proximal end and a distal end, wherein the proximal end of the damping plate is hinged to a first point of a sidewall of the moonpool such that the damping plate is pivotally movable between an open position and a closed position; a driving mechanism disposed within the enclosed derrick and configured to move drilling equipment within the enclosed derrick; a sheave attached to the sidewall at a second point of the sidewall, which is higher than the fist point; a cable coupled between the damping plate and the driving mechanism via the sheave such that the driving mechanism drives pivotal movement of the damping plate in addition to moving the drilling equipment. A~~a~~ damping apparatus for a moonpool, which has one or more damping plates covering the moonpool entirely or partially, is characterized in that the damping plates are pivotally hinged to a sidewall of the moonpool, one or more conveying units are disposed above the moonpool to convey drilling equipment, one or more driving wires are coupled between the damping plates and the conveying units, and the conveying force of the conveying units is transferred through the driving wires to the damping plates, so that the damping plates are pivoted.

A pair of driving wires may be coupled to the damping plates in a bilateral symmetry.

The damping plates may include a pair of damping plates installed to face each other in a bow direction and a stern direction of a hull.

An enclosed derrick may be disposed above the moonpool, one or more conveying units may be installed inside the enclosed derrick to convey drilling equipment, and the driving wires may be coupled such that the driving wires are guided between the conveying units and the damping plates by a plurality of sheaves.

The conveying unit may be one of a blowout preventer (BOP) trolley conveying a BOP and a lower marine riser package (LMRP) crane conveying an LMRP.

According to another embodiment of the present invention, a damping apparatus for a moonpool, which has one or more damping plates at least partially opening and closing the moonpool located at the center of an arctic drill ship, is characterized in that an enclosed derrick is disposed above the moonpool, one or more conveying units are

WHAT IS CLAIMED IS:

1. A damping apparatus for a moonpool in a ship having an enclosed derrick disposed over the moonpool, the apparatus comprising:

a damping plate comprising a proximal end and a distal end, wherein the proximal end of the damping plate is hinged to a first point of a sidewall of the moonpool such that the damping plate is pivotally movable between an open position and a closed position;

a driving mechanism disposed within the enclosed derrick and configured to move drilling equipment within the enclosed derrick;

a sheave attached to the sidewall at a second point of the sidewall, which is higher than the fist point;

a cable coupled between the damping plate and the driving mechanism via the sheave such that the driving mechanism drives pivotal movement of the damping plate in addition to moving the drilling equipment.

2. The damping apparatus according to claim 1, further comprising another cable coupled between the damping plate and the driving mechanism via a sheave, wherein the cable and the other cable are coupled to the damping plate in a bilateral symmetry.

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