As described above, since the locking and unlocking operation of the conventional damping device is carried out by a worker's action that manually locks and unlocks the opened state of the damping device, a worker is in danger of falling and the locking and unlocking operation is very inconvenient.

SUMMARY OF THE INVENTION

EmbodimentsAn aspect of the present invention seekis directed to provide a locking apparatus for a damping device of a moonpool, which can automatically lock and unlock an opened state of a damping device of a moonpool.

According to an aspectembodiment of the present invention, a damping device locking apparatus for a damping device of a moonpool, which automatically locks and unlocks one or more damping devices opening and closing athe moonpool in an opened state, the damping device pivotably installed on a sidewall of the moonpool, the locking apparatus includes: one or more first locking members installed in thea sidewall of the moonpool; one or more second locking members installed in a side of the damping device; and a holding unit separably holding the first locking members and the second locking members when the damping devices are in the opened state, wherein, the first locking member is installed in the sidewall of the moonpool adjacent to an end of the damping device when the damping device is in the opened state, the second locking member is installed at the end of the damping device, and the first locking member and the second locking member are disposed not to be interfered with each other when the damping device is in the opened state.

The first locking member may have one or more first locking holes, and the second locking member may have one or more second locking holes.

~~The first locking member may be installed in a sidewall of the moonpool adjacent to an end of the damping device when the damping device is in the opened state, the second locking member may be installed at the end of the damping device, and the first locking member and the second locking member may be disposed not to be interfered with each other when the damping device is in the opened state.~~

The holding unit may include: a driving cylinder disposed on the first locking member; and a holding shaft installed to be vertically movable by the driving cylinder, such that the holding shaft moves vertically and is inserted into or released from the first and second locking holes when the first locking hole of the first locking member and the second holding hole of the second holding member are matched with each other,

whereby the holding unit separably holds the first locking member and the second locking member.

The locking apparatus may further include one or more guide members above the first locking member, wherein the guide members have guide holes.

The locking apparatus may further include a pair of regulation plates on left and right sides of the holding shaft.

According to another embodiment, a locking apparatus for a damping device of a moonpool, which automatically locks and unlocks one or more damping devices opening and closing the moonpool, is characterized in that, when the damping device is in an opened state, the damping device is automatically unlockably held at a storage position of the moonpool.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view illustrating a locking apparatus for a damping device of a moonpool according to an embodiment of the present invention.

FIG. 2 is an enlarged view illustrating a portion indicated by an arrow A of FIG. 1.

FIG. 3 is a plan view looked in a direction of an arrow B of FIG. 2.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

Exemplary embodiments of the present invention will be described below in detail with reference to the accompanying drawings. Throughout the disclosure, like reference numerals refer to like parts throughout the various figures and embodiments of the present invention.

FIGS. 1 to 3 illustrate a locking apparatus for a damping device of a moonpool according to an embodiment of the present invention.

As illustrated in FIG. 1, a locking apparatus for a damping device of a moonpool according to the present invention may be applied to a moonpool structure in which one or more damping devices 2 are pivotally installed in a sidewall of a moonpool to open