ABSTRACT

The optimization study of the ship pedestal structure is of great significance to the lightweight and the anti-shock performance of the ship. Therefore, the TOSCA software is used to design the ship pedestal in topology optimization. By setting the load, determining the objective function, selecting the constraints, and selecting the optimization region, the topology-optimized pedestal structure is obtained. Then, the structure was redesigned to determine the final structure of the pedestal. Finally, compared with the traditional pedestal for modal and anti-shock performance, it is verified that the designed pedestal in this paper has improved performance over the traditional one.

REFERENCES