

# Structure Design of the ship Pedestal Based on Topology Optimization

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## 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. of a ship's pedestal. 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.

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