

A procedure for ship hull vibration analysis used for structural optimization loop

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ABSTRACT

A methodology, using COSMOS/M licensed soft, to determine the global vibrations of the ship hull for optimizing loop were performed. Due to the fact only central part (cylindrical part) of the ship hull structure is optimized, two beam models for ship hull are used: full beam model and reduced beam model. A combined beam model and 3D shell model for the ship hull is used. The values of the rigidities of the elastic supports placed on the ends of the central area of the ship (interested area) are determined taking into account the same modal shape and frequency for the same mode

Keywords: finite elements, free vibrations, structure optimization

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