

NUMERICAL APPLICATION IN WEIGHT REDUCTION OF LATERAL PLATE OF RESCUE ROBOT

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Abstract

In general, weight reduction will always lower the strength of the specimen. The primary purpose of this paper is weight reduction of lateral plate of rescue robot without causing the strength of it by using the Boundary Element Method (BEM). The dynamical loading conditions are performed before and after weight reduction. The numerical results of the stress distribution and the plastic deformation along the center line (interface) of the lateral plate show that the endure limits of the plate before and after weight reduction are almost the same and therefore, will not lower the strength of the plate.

Keyword : Boundary Element Method (BEM)