

Abstract

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Collision Analysis of Ship Side

Structural design of ships against collision requires prediction of the extent of damage to stiffened plates subjected to impact. In ship structures, stiffened plates are furnished with vertical horizontal stiffeners to sustain conventional loads such as shearing, bending and local buckling. The consideration of collision in ship structural design is especially important for tankers where accidents may cause serious environmental pollution. In predicting the extent of collision damage, FE modeling of stiffened plates using ABAQUS software is applied to demonstrate different collision scenario. Typical stiffened plates of tankers in service with different configurations of stiffeners are used to examine absorbed energy in each case. The aim of this paper is to examine the stiffener shape that absorbs more deformation energy.