

Abstract

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A New Quantitative Fatigue Life Assessment using Alternative Stiffened Panels in Midship Section

The objective of this work is to estimate the hull girder fatigue life for an unconventionally stiffened midship section stiffened with Y-stiffeners. Specific dimensions of the Y-stiffener are obtained starting from the actual T-stiffener aiming at a higher section modulus whilst at the same time achieving lighter same weight. Using AutoCAD software, validation tests are carried out for some cases. Common Structural Rules are used to calculate the fatigue damage for 11 modified midship section cases taking into consideration the effect of corrosion thickness reduction. A comparison is held between all cases from the point of view of fatigue life assessment.