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FINITE ELEMENT ANALYSIS OF FORK LIFT MAST

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Abstract

The present work involved the optimization of fork lift mast design so as to controlled the deflection, maximum shear stress, von-mises stress, this work compare the stresses in the structural steel & gray cast iron material for the same loading condition. The stress distribution has been analyzed using ANSYS 11 software for which maximum shear stress equivalent shear stress at critical area has been calculated. Structural behavior of mast under loading and boundary condition using analytical model is very difficult. Therefore 3D solid model has been chosen in order to predict the detailed stress.

Keywords: Finite element analysis, forklift, mast

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