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CHARACTERISTICS OF RESIDUAL STRESSES ON WELDED TUBULAR T-JOINTS

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ABSTRACT

Welding is a wide range multistate permanent fastening method of fabrication. Globally welding technology has numerous applications. The present paper deals with the analysis of distribution of the residual stresses that act on the welded tubular T-joints. Residual stresses vary according to the varying temperatures on the joint. The equivalent stresses and other stresses are calculated from the theoretically calculated inputs. The theoretical inputs are given to the analysis software ANSYS Workbench i.e. heat flux, temperature and young's modulus of the material selected for the joint. The model i.e. T-joint including with the weld region is designed in designing software CATIA and the model is imported to ANSYS for analysis.

KEYWORDS: Welding**,** ANSYS Workbench, CATIA, Residual stresses, Tubular Joint