MODELING BOLT BEHAVIOR USING FINITE ELEMENT ANALYSIS

By

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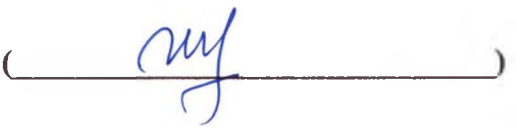
DECLARATION

I am Jumatirah Bt. Mohd Alias, 2003366962 confirm that the work is my own and that appropriate credit has been given where reference has been made to the work of others.



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Thank you.

ABSTRACT

The failure of bolted connections will present serious economic and human consequences, so it is important to obtain a better understanding of the structural behavior of bolted connections. The objective of this study is to find the best numerical bolt model and analyzing their behavior when subjected to tensile loads. There are three models of bolt will be analyze for this study. First model was analysed using brick element, second model using beam element and the third model bolt using joint element. For this study the finite element software, LUSAS will be used to study the various connection models. Convergence study was conducted in this research. For this study, it was found that the brick element is the best model as compared with the beam element and joint element.

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