

Study on Bending Characteristics of Square Tube Using Energy Absorption Part

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Abstract : In the square tube subjected to the bending load, the rigidity of the entire square tube is reduced when a collapse occurs due to local stress concentration. Therefore, in this research, the influence of bending load on the square tube with attached energy absorbing part was examined and reported. The analysis was conducted by using Finite Element Method (FEM) to produced bending deflection and buckling points. Energy absorption was compared from rigidity of attached part and square tube body. Buckling point was influenced by the rigidity of attached part and the thickness rate of square tube.

Keywords : energy absorber, square tube, bending, rigidity

Conference Title : ICMME 2017 : International Conference on Mechanical, Materials and Mechatronics Engineering

Conference Location : Madrid, Spain

Conference Dates : March 26-27, 2017