

Design and Analysis of Two Wheeler Plastic Fuel Tank Cover for Metal Substituting with Engineering Plastic

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Abstract

Fuel tank is used in automobile industries to carry fuel and supply fuel to engine via fuel filter, fuel pump. The designing dimension of two wheelers fuel tank has been occurred very typically. In this paper involves geometrical and finite element modelling of protective plastic fuel tank cover design by Catia v5 r 20. The designing is demonstrated volume and load of the fuel tank cover. The selection of the material has been optimised through the properties of material to metal. It reveals that engineering plastic has been propitious result to the protective cover. The analytical results are validated in comparison with FEM in ANSYS workbench. Both the results agree with each other. Thus methodology can be applied to plastic fuel tank cover used in real-world applications.

Keywords: Engineering Plastics, Catia v5 r20, ANSYS, FEM.