



ADVANCED AUTOMOBILE DESIGNS AND STRUCTURAL ANALYSIS USING DELAUNAY VORONOI STRUCTURE

A Project report submitted
In partial fulfillment of the requirements for award of
Degree of
BACHELOR OF TECHNOLOGY
IN
MECHANICAL ENGINEERING

SUBMITTED BY

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CERTIFICATE

This is to certify that the thesis entitled “ADVANCED AUTOMOBILE DESIGN S AND STRUCTURAL ANALYSIS USING DELAUNAY VORONOI STRUCTURE” being submitted by

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in partial fulfillment of the requirement for the award of the degree of BACHELOR OF TECHNOLOGY in MECHANICAL ENGINEERING is a record of bonafide work done by him under my supervision during the academic year 2017-18.

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EXTERNAL EXAMINER

ABSTRACT

In this project, research and development of an Innovative automobile design is done for making full-bodied structure which can be made using rapid manufacturing techniques, although rapid manufacturing techniques are in use by various automobile industries, further; optimization techniques are also used to reduce weight of an automobile design.

In this research it is observed that the application of advanced manufacturing and optimization methods are becoming crucial in case of motor sport cars design which has to be neutralized to its sensitiveness to weight during weight reduction process, This project is mainly focused to develop a structure and ensure proper stiffness for the safety of the occupant while driving or racing car.

To overcome these problems an innovative modal is analyzed using, voronoi diagrams, CAD software and CAE Tools.