DESIGN OF A LIGHTWEIGHT CHASSIS FOR E-RIKSHAW-
A REVIEW

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Abstract

Three wheeler Auto-rickshaws are considered to be small vehicles but extensively used in many countries for small distance purpose especially within same city. These three wheelers are majorly used as taxi in urban areas in India due to inexpensive services. Mainly 2 and 4-stroke engine with no pollution control is used in rickshaw causes pollution. In order to prevent this issue E-Rickshaw (Electric Rickshaw) is used in many parts of country. This paper is to suggest a lightweight chassis design of vehicle like E-rickshaws.

Keywords: *Chassis, E-rickshaw, battery operated vehicles, optimisation, automobile.*

Introduction

To redesign the auto-rickshaw the best possible way to modify its engine with some renewable energy sources which is also pollution free such as solar batteries can be used to run the engines. One of the most significant and prominent structure of any automotive vehicle is chassis. It is a structure or frame on which the body of vehicle and other components such as engine is mounted it also concludes the frame, suspension, wheels and brakes and it is made of hollow tube structure. The chassis frame should also provide support to load of the body and can easily carry the load of passengers. Chassis frame should withstand the forces and stresses caused by sudden movement and road condition. The chassis frame is majorly manufactured using carbon steel materials or aluminium alloys due to their structural properties and light weight characteristics.