

**DESIGN AND FABRICATION
OF
AUTOMOTIVE EXHUAST THERMO ELECTRIC GENERATOR**

A PROJECT REPORT
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF

Bachelor Of Technology
IN
MECHANICAL ENGINEERING

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CERTIFICATE

This is to certify that the project report is entitled "**DESIGN AND FABRICATION OF AUTOMOTIVE EXHUAST THERMO ELECTRIC GENERATOR**" was carried out by **T.KUMAR(16815A0339)**, **K.KRISHNA RAO(15811A0324)**, **S.SAI(15811A03C4)** , **S.BALA RAJU(15811A03C1)** in partial fulfillment of the requirements for the award of the **BACHELOR OF TECHNOLOGY** in "**MECHANICAL ENGINEERING**" To JNTUK university at **AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY** , Narsipatnam. during the academic years **2015-2019**.


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EXTERNAL EXAMINER

ABSTRACT

About 40% of the applied fuel into a vehicle is lost as waste exhaust to the environment. The thermoelectric generator (TEG) has the potential to convert exhaust waste heat into electricity which improves the fuel economy by powering the various auxiliary units in an automobile there by eliminating the belt load to the engine results in 3% to 5% improvement in fuel economy.

The current project discusses the optimal design of the automotive exhaust thermoelectric generator (AETEG) and the design is conducted analytically based on the idea of air cooled TEG system using fins and An experimental system is fabricated and tested by attaching to exhaust pipe of a two wheeler IC engine to verify the validity of the proposed system.

The sole objective of this project is to generate electricity using thermoelectric generator (TEG), to discuss the methods to harvest the thermal energy dissipated by combustion gases. Thus, this technology will reduce the electrical load on alternator in turn reducing the fuel consumption of the two wheeler. As it is completely renewable technology no power is to be consumed in this process and requires less maintenance.