Analysis of Power Generation from Exhaust Gas on 4 Stroke 4 Cylinder Petrol Engine using Thermoelectric Generator

Abstract:-

Currently, a great deal of the automotive industry's R&D effort is focused on improving overall vehicle efficiency. Almost every type of internal combustion engine work on the principle of heat engine. It converts the chemical energy into thermal energy and in the form of pressure of air carrying the heat, piston movement is done.

Traditionally, only 25 to 30% of energy is begin utilized to run the vehicle and accessories mounted on the engine and left amount of energy is wasted in various ways likes in the form of exhaust and cooling of engine component. The useful engine is used to run the engine as well as generator. So the efficiency of those engine were very low. But one method to improve the efficiency is to develop methods to utilize waste heat that is usually wasted.

One of the promising technology that was found to be useful for this purpose were thermoelectric generator. Therefore, this project involved making a bench type, proof of concept model of power production by thermoelectric generator and heat from exhaust emission of engine. In this study we investigated the use of thermoelectric generator for power production.

The output energy checked by increasing of cylinder one by the help of morsh test. Power develop on the engine is checked by the morsh test. Thermoelectric generator so to impart stream of exhaust gas on surface of it and to generate small electric.

Block Diagram:-