WASTE HEAT RECOVERY AND POWER GENERATION SYSTEM

A Project report submitted in partial fulfillment of the requirements for award of

degree of

BACHELOR OF TECHNOLOGY
IN
MECHANICAL ENGINEERING

SUBMITTED BY

B.VENKATESH	**14811A0319**
K.SAI KRISHNA	**14811A0360**
D.APPANNA	**14811A0327**
B.VAMSI KRISHNA	**14811A0315**

Under the Guidance of

Sri. GONDESI S M REDDY M.Tech

Assistant Professor

DEPARTMENT OF MECHANICAL ENGINEERING

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

(PERMENANTLY AFFLIATED TO JNTU-KAKINADA, ACCDREDITED BY NBA & NAAC, APPROVED BY AICTE, RECOGNISED BY UGC 12f & 2b)

TAMARAM (V), MAKAVARAPALEM (M),

NARSIPATNAM (DIVISION), VISAKHAPATNAM DISTRICT-531113

2014-2018

AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

(APPROVED BY AICTE AFFILIATED TO JNTU-KAKINADA)

(AN NAAC & N.B.A ACCREDITED INSTITUTION)

TAMARAM, MAKAVARAPALLEM, VISAKHAPATNAM-531113

DEPARTMENT OF MECHANICAL ENGINEERING

CERTIFICATE

This is certify that the project work entitled **"WASTE HEAT RECOVERY AND POWER GENERATION SYSTEM"** is a bonafied record of work done by **B.VENKATESH (14811A0319), K. SAI KRISHNA(14811A0360), D.APPANNA(14811A0327), B.VAMSI KRISHNA(14811A0315)** in partial fulfilment of the requirement for the award of Bachelor of technology in MECHANICAL ENGINEERING by Jawaharlal Nehru technological university, Kakinada . During the year 2014-2018.

21/2/19

Sri. GONDESI S M REDDY M.Tech
PROJECT GUIDE

Sri. V. HARI KIRAN M.Tech (Ph.D.)
HEAD OF DEPARTMENT

HEAD OF THE DEPARTMENT
MECHANICAL ENGINEERING
Avanthi Institute of Engg. & Tech.
Makavarapalem, Visakha (Dt) - 531113

EXTERNAL EXAMINER

ABSTRACT

The increasing worldwide problem regarding rapid economy development and a relative shortage of energy, the internal combustion engine exhaust waste heat and environmental pollution has been more emphasized heavily recently. Out of the total heat supplied to the engine in the form of fuel, approximately, 30 to 40% is converted into useful mechanical work, the remaining heat is expelled to the environment through exhaust gases and engine cooling systems, resulting into serious environmental pollution, so it is required to utilized waste heat into useful work.

In this project, demonstrating a concept of generating power in a moving vehicle by the thermos electric generator. By placing a TEG on the silencer, depending upon the temperature of the silencer, the electric power is generated. The generated power is used to charge the mobile after rectification. The temperature of exhaust gases flowing through gas pipe is around 200°C to 300°C which is further passed through the TEG mode where thermal energy is converted into electrical energy.