ABSTRACT

A thermoelectric generator is a device used to generate an electric potential difference between two different semi-conducting materials. This thermoelectric element will flow a current which will produce a voltage difference, this principle is known as the Seebeck effect.

This research was conducted to design a motor vehicle exhaust heat conversion system into electricity using a sp1848 type TEG. The hot side of the TEG is heated by exhaust heat energy from the vehicle exhaust while the cold side of the TEG is attached to the waterblock and connected to the radiator as a heat absorber on the TEG. the power stored in the Li-Po 3.7 Volt 400 mAh battery, the voltage from the TEG conversion will be stabilized using a Buck Converter type CE8301 USB Port model and the power will be detected using the INA219 sensor.

The system built can be used to charge the Li-Po 3.7 Volt 400 mAh.

Keywords: Thermoelectric Generator, Buck Converter, Li-Po