

## **electricity generation from pizeo**

### **Abstract**

The increase in energy consumption of portable electronic devices and the concept of harvesting renewable energy in human surrounding arouses a renewed interest. This project focuses on one such advanced method of energy harvesting using piezoelectric material. Piezoelectric material can be used as mechanisms to transfer mechanical energy, usually ambient vibration, into electric energy that can be stored and used to power other devices. A piezoelectric substance is one that produces an electric charge when a mechanical stress is applied. Conversely, a mechanical deformation is produced when an electric field is applied. Piezoelectric materials have vast application in real fields. Some of the application is used in our research. This research focuses on one such advanced method of energy harvesting using piezoelectric material. Piezoelectric material can be used as mechanisms to transfer mechanical energy, usually ambient vibration, into electric energy that can be stored and used to power other devices.

### **INTRODUCTION**

As we know that the need of electricity is increasing day by day in every field of our life, besides this electricity is one of the biggest issue the third world countries are facing right now, so we are contributing some efforts towards this issue by our research. In our research, the vehicle is provided with piezoelectric device which is used to generate electricity. The piezoelectric material we used is Lead Zirconate Titanate. The piezoelectric material is placed between each coil spring or leaf spring. When the automobile moves on uneven road the compression stress produced is given to the piezoelectric material. The crystal will generate measureable electricity when their static structure is deformed by 0.1%

of the original dimension. So we can generate electricity from automobiles besides the System is friendly and economical.

Block Diagram :

