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# INNOVATION

## CATEGORY

# **THE CONVERSION OF THERMOELECTRIC ENERGY INTO ELECTRICAL ENERGY IN APPLICATION OF DEREM CHARGER**

**Mahamad Bin Hj Hamid,**

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**Chua Shang Hang**

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*Sekolah Menengah Kebangsaan Ibrahim Sg Petani*

This report aims to create a device, which is DEREM Charger to convert thermoelectric energy into electrical energy. Current hot issues such as wastage of electricity in the form of heat energy and great amount of heat loss in factories are taking our attention. DEREM Charger can be used to reduce heat loss and generate more electricity effectively. DEREM Charger is produced and functions based on Seebeck effect. The temperature difference between two dissimilar electrical conductors or semiconductors can produce a voltage difference between the two substances. DEREM Charger uses thermoshield to trap the heat energy while inside DEREM Charger, difference of temperature is produced and thermoelectric plates are used to convert thermoelectric energy into electrical energy. The electricity produced by DEREM Charger is constant and stable. Heat loss can be reduced and more electrical energy can be produced using DEREM Charger. DEREM Charger can be used to charge phones and supply electricity to some electrical devices, and also, in a bigger size, can be used in factories to convert a huge amount of heat loss into electrical energy. Besides, DEREM Charger is also made using recycle materials, which makes DEREM Charger an eco-friendly one. To be mentioned, e-waste ( waste of electrical products ) are used to make DEREM Charger. DEREM Charger can convert thermoelectric energy into electrical energy effectively based on Seebeck Effect. Therefore, we hope that DEREM Charger can help to build a greener environment and a eco-friendlier society. We also wish that DEREM Charger can be applied in countries that are short of electricity supply to provide them unlimited electricity source.



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