Generation of Electric Energy by Seebeck Effect

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The proposed prototype uses as a system of electric energy generation the Seebeck thermoelectric effect using Peltier cells, this effect was discovered in 1821 by the research physicist Thomas Johann Seebeck. The development of this prototype is due to the population increase with the relative availability of fossil fuels has developed consumption habits disproportionate even though it is known of his exhaustion throughout this century, also the use of these for transformation of electric energy contributes to the accumulation of greenhouse gases, thus is treated to reduce dependence on fossil fuels. The thermoelectric cells were placed (Peltier cells) between two aluminum plates and will remain at a higher temperature, and the second plate is maintained at a lower temperature, therefore a temperature difference is obtained and this generates an electric current. The three fundamental parts to the design of the power generator are thermoelectric Peltier cells, the cooling system and the heating, based on these three variables is investigated which are the most feasible materials for the design of the prototype. Taking in mind the current and voltage ranges produced by the power generator, was designed a circuit for the distribution of electricity in AC and DC in which you can connect appliances operating at 127 VAC and low-power appliances operating at 12 VDC. The built prototype can be used to scale, is independent of the electric power distribution and possess no movable parts, it is accessible to the general public since their operation and maintenance require no knowledge of high technology.

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