IJARSCT



International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

Volume 2, Issue 6, May 2022

Thermoelectric Refrigeration System

Prof. Ashish Devshette, Abhishek Kumbhar, Onkar Nalage, Aditya Kapse, Satyam Nagade JSPM's Rajarshi Shahu College of Engineering, Pune, Maharashtra, India

Abstract: A thermoelectric refrigerator, also known as a thermoelectric cooler module or Peltier cooler, is an electric component made of semi-conductors that acts as a tiny heat pump. When a thermoelectric cooler module is powered by a low voltage direct current power source, heat is transferred from one side to the other. As a result, one module face will be cooled while the opposite face is heated at the same time. The same fundamental laws of thermodynamics govern both thermoelectric and mechanical refrigerators, and both refrigeration systems, despite their vastly different appearances, operate on the same principles.

Keywords: Thermoelectric Refrigerator

REFERENCES

- [1]. Mayank Awasthi, "Design and Development of Thermoelectric Refrigerator," vol. 1, p.13, October 2012.
- [2]. L. Chen and F. Sun F. Meng, "Analysis of Thermoelectric Refrigerator," p. 10, 2011.
- [3]. Nimesh. B. Parmar, Dr. Nirvesh. S. Mehta Jaspalsinh. B. Dabhi "Design of Thermoelectric Refrigeration System," p. 3, January to March 2012.
- [4]. Chukuneke Jeremiah Lekwuwa, Itoje Harrison John Onoroh Francis, "Performance of aThermoelectric Refrigerator," p. 7, January 2013.
- [5]. Dr. Gary, "Optimization for Thermoelectric Refrigeration," in Optimization for Thermoelectric Refrigeration. University of Missouri Columbia, December 2005, p.124
- [6]. M. Vekataramanan V. Rajangam, "Design And Cfd Analysis Of Thermoelectric Cooling System," p. 5, 2015
- [7]. Gao Min and D. Rowe, "Experimental evaluation of prototype thermoelectric domestic refrigerators,"., 83.133-152, (2006)
- [8]. D. Zhao and G. Tan, "Applied Thermal Engineering," A review of thermoelectric cooling: Materials, modeling and applications, vol. 66, no pp. 15-24, may 2014.
- [9]. H. Chattopadhyay and S. Neogi M. K. Rawat, "A review on developments of thermoelectric refrigeration and air conditioning systems: a novel potential green refrigeration and air conditioning technology," International Journal of Emerging Technology and Ad.

DOI: 10.48175/IJARSCT-4201