



## CFD ANALYSIS OF PERFORATED HEAT SINK FINS

Ashish Ranjan<sup>1</sup>, Vishal Gupta<sup>2</sup>, Samerjeet Bagri<sup>3</sup>

P.G. Student, Dept. of Mechanical Engineering, Radharaman Institute of Research and Technology, Bhopal, M.P., India<sup>1</sup>

Associate Professor, Department of Mechanical Engineering, , Radharaman Group of Institution, Bhopal, M.P., India<sup>2</sup>

Assistant Professor, Department of Mechanical engineering, Radharaman Group of Institutions, Bhopal, M.P., India<sup>3</sup>

**ABSTRACT:** Recently the need for high performance and compact size electronic device is rising exponentially. With the reduction in size and increase in the number of task performed by these device the need for better and compact heat removal device is also increasing. Various researchers are researching in the field to provide an efficient heat removal device which has high efficiency and is compact in size. Electrical and mechanical goes in series with each other. In this study the objective was to analyze Heat sink fin with different perforation shapes. Heat sinks are used as a cooling device in various applications and fields.



In this study various heat sink model were designed with varying perforation shapes in order to increase contact area. As it is a proven fact larger the contact area better will be the cooling. This was kept in mind while designing the hollow perforated fins for the analysis..

**Keywords:** *Perforation, Fins, Heat Sink, Temperature*

### 1. INTRODUCTION

With the increase in high performance and compact size electronic device the need for better and compact heat removal device is also increasing. Researches to provide an efficient heat removal device which has high efficiency and is compact in size are being done by researchers. In this study 3D models of pin fin heat sink with various perforation shape were studied for heat transfer rate.

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