

STRUCTURAL ANALYSIS OF HYBRID COMPOSITE PISTON FOR IC ENGINE

S. Prabu¹ & Arun. V²

*¹Assistant Professor, Department of Mechanical Engineering, Mahendra College of Engineering,
Salem, Tamil Nadu, India*

*²Research Scholar, Department of Mechanical Engineering, Mahendra College of Engineering,
Salem, Tamil Nadu, India*

Received: 22 Feb 2018

Accepted: 05 Mar 2018

Published: 10 Mar 2018

ABSTRACT

The main aim of this research was to analyze the performance of hybrid composite piston. The development of materials provided numerous possibilities for weight reduction and observed significant improvement in properties. The hybrid composite was made of Al2024, Silicon Carbide and Fly ash. The piston model was created in SOLISWORKS and thermal analysis was done on ANSYS 14.5. Al2024, Sic and Fly ash hybrid composite material showed better wear resistance, Corrossion resistance, High tensile strength, Impact strength, Hardness and low density compared to Aluminium alloys.

KEYWORDS: *Ansyl4.5, Al2024, Fly Ash, Hybrid Composite, Silicon Carbide, Solid Works*