



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

Department of Mechanical Engineering

REPORT OF SKILL BASED MINI PROJECT

Heat And Mass Transfer (190513)

Title of Project: HEAT TRANSFER ANALYSIS OF ENGINE CYLINDER FINS HAVING TRIANGULAR SHAPE

Introduction: It is most common approach to enhance the Heat transfer by using the extended surfaces. A plain fin may increase the surface area but a special shape extended surface may increase heat transfer coefficient in addition to the heat exchanger. The extended surfaces for liquids typically use much smaller fin heights than that used for gases because of the higher heat transfer coefficient for liquids.

Description of Model

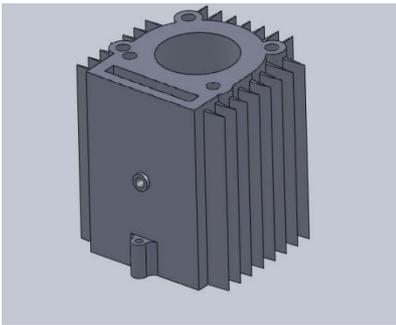


Fig: - ENGINE CYLINDER WITH TRIANGULAR FIN

Thickness of the fin is 3 mm.

Material of the fin: 1. Aluminium Alloy, 2. Magnesium Alloy.

Applications of Model

1. Fins are commonly used as heat management in electrical appliances.
2. Condensers in Refrigeration and Air Conditioning.
3. Engine Cooling.
4. Thin plate of fins of Car Radiator
5. Heat exchanger in power plant
6. Most effective in application where heat transfer coefficient (h) is low.

What I Learned Through Project:

I have learned that using triangular fins is better, but circular fins are mostly used in vertical engines than horizontal engines and also by using that, the weight of the fin body is also increases.

Submitted By

Name and Signature: Puran Patel
Enrolment Number: 0901AU201021
Class: Vth Sem. Automobile Engineering

Head
Deptt. of Mechanical Engineering
Madhav Institute of Tech. & Science
Gwalior - 05 (India)

Submitted To
Prof. Bhupendra Pandey
Assistant Professor



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE GWALIOR

Department of Mechanical Engineering

COMPILED REPORT OF SKILL BASED MINI PROJECT

Heat And Mass Transfer (190513)

Session: December – June 2022

Submitted By
Puran Patel, V Semester
Automobile Engineering

Submitted To
Prof. Bhupendra Pandey
Assistant Professor
