



DEPARTMENT OF MECHANICAL ENGINEERING
NSS COLLEGE OF ENGINEERING,
PALAKKAD - 8

BTECH FINAL PROJECT 2023-24

1. **Project No** : B052024
2. **Project Title** : BATTERY THERMAL MANAGEMENT SYSTEM
3. **Students Name** :

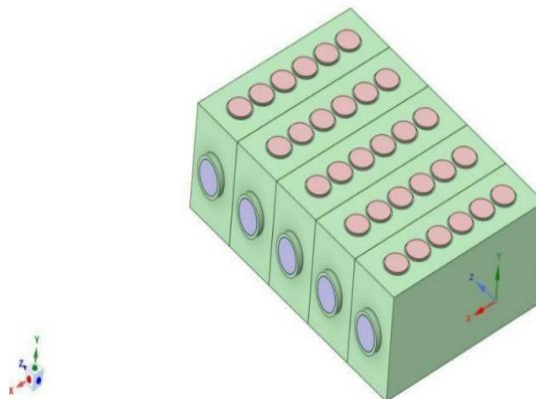
Register Number	Name	Roll No	Class
NSS20ME071	HARIKRISHNAN T BABUURAJ	105	S8MB
NSS20ME080	KARTHIK J	113	S8MB
NSS20ME089	MOHAMMED IJASYASEEN K	121	S8MB
NSS20ME101	PRADEESH D	131	S8MB
NSS20ME122	SOURAV P	150	S8MB

4. **Project Guide** : SREERAM P T
5. **Abstract** :

The increasing adoption of electric vehicles has emphasized the importance of thermal management of lithium-ion batteries. Our project aims to enhance the safety and efficiency of these batteries by implementing an innovative cooling system. Overheating is a significant issue, leading to potential failures and safety hazards. By introducing an effective cooling system, we can mitigate these risks, prolong battery life, and improve efficiency. The proposed system utilizes a mixture of ethylene glycol and water as the coolant, circulating between an inner graphite jacket and an outer fiber glass jacket. The study analyzes both unidirectional and bi-directional flow patterns to determine the optimal configuration, using Ansys software for simulation and optimization. This project contributes to the development of a robust thermal management system that enhances battery performance and longevity.

6. **Project Picture** :

Click an object. Double-click to select an edge loop. Triple-click to select a solid.



Ansys
2024 R1
STUDENT