



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

BTECH FINAL PROJECT 2024 - 25

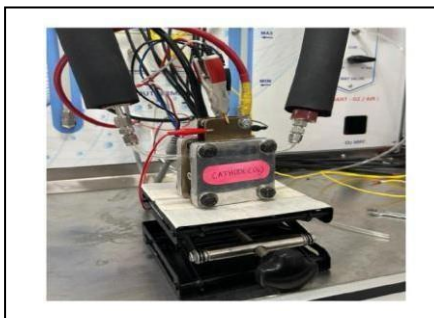
1. **Project No** : A092025
2. **Project Title** : PERFORMANCE ENHANCEMENT OF POLYMER ELECTROLYTE MEMBRANE FUEL CELL
3. **Students Name:**

Register Number	Name	Roll No	Class
NSS21ME019	ADHIL C	17	S8MA
NSS21ME023	ADITHYASANKARM	21	S8MA
NSS21ME027	AISWARYAC	25	S8MA
NSS21ME050	DEEPAKSURESH	47	S8MA

4. **Project Guide** : Dr. SUDEEP U
5. **Abstract** :

The Project Performance Enhancement in Polymer Electrolyte Membrane Fuel Cells is accomplished mainly through three methods ; Different types of coating over Gas Diffusion Layer (GDL) like Brush and Spray coatings with and without separating GDL then Changing Teflon gasket to silicon and reducing its thickness to minimize Interfacial Contact Resistace (ICR) , and also last method adopted is changing electrolyte from conventional Nafion to Gore membrane. Among coating methods Seperated GDL spray coating was best. Changing gasket and reducing thickness almost yielded three times power output than of coating method and finally best results obtained by changing membrane to Gore.

6. **Project Picture:**



7. **Project Report:** [https://drive.google.com/file/d/1j8ioSr6M288Ubl-J464aUl7gyKHRykCW/view?usp=drive link](https://drive.google.com/file/d/1j8ioSr6M288Ubl-J464aUl7gyKHRykCW/view?usp=drive_link)