



# SETHU INSTITUTE OF TECHNOLOGY



DEPARTMENT OF MECHANICAL ENGINEERING

**CENTRE FOR ENERGY RESEARCH**

## About the laboratory:

Energy research laboratory conduct active research and offer consultancy services in the field of energy, solar thermal, heat transfer and renewable fuels.

## FACILITIES AVAILABLE

### **GAS ANALYZER**

(5 Gas analyzer)

MAKE: AVL

Used to measure the exhaust smoke values (CO, CO<sub>2</sub>, HC, O<sub>2</sub> and NO<sub>x</sub>) from all petrol, CNG, LPG, diesel and bio diesel driven engines.



### **SMOKEMETER**

MAKE: AVL

Smoke meter is used to measure the smoke/carbon of diesel exhaust. These instruments have been designed to quantify the visible black smoke emission utilizing such physical phenomena as the extinction of a light beam by scattering and absorption.



**COMPUTERIZED  
COMBUSTION ANALYZER –  
single cylinder variable  
compression ratio diesel engine  
with DATA ACQUISITION  
system.**

Variable compression ratio is the technology to adjust internal combustion engine cylinder compression ratio to increase fuel efficiency while under varying loads.

This engine is used to investigate the diesel engine performance and combustion using various biodiesel blends.



**Computerized single cylinder  
diesel engine with EDDY  
CURRENT DYNAMOMETER  
AND DATA ACQUISITION  
System.**

This engine is used to investigate the diesel engine performance using various biodiesel blends.



**Consultancy and testing**

- ✓ Providing consultancy and services to industries/academic institutions
- ✓ Ph.D, M.E., and B.E., project works related to energy, biofuels and solar.
- ✓ Development of biofuels

**CONTACT:**

**Head of the department  
Mechanical Engineering Department  
Sethu Institute of Technology  
Kariapatti-626115.**

**Email: [hodmech@sethu.ac.in](mailto:hodmech@sethu.ac.in)**