



**KARUNYA INSTITUTE OF TECHNOLOGY AND SCIENCES**  
(Declared as Deemed to be University under Sec. 3 of the UGC Act 1956)  
A CHRISTIAN MINORITY RESIDENTIAL INSTITUTION  
AICTE Approved & NAAC Accredited  
Karunya Nagar, Coimbatore - 641 114, Tamil Nadu, India

## **DEPARTMENT OF MECHANICAL ENGINEERING**

### **Centre for Research in Metallurgy (CRM)**

The centre for Research in Metallurgy was established in the year 2012 with a four faceted objective. Its vision is to impart knowledge on material science and engineering to the student community, carryout quality and ethical research in the field of materials and material processing engineering, help the industries in solving problems that they face in metallurgy and related areas through consultancy services and lend a helping hand for students across the country in completing their project related to materials and materials processing.

The centre is equipped with modern materials testing and materials characterizing equipment's such as Metallurgical microscope with Image analyser, Pin-on-disk wear monitor and tester, Microhardness tester, Ultrasonic flaw detector, Tensile testing machine, Four ball tester, Fatigue Strength Tester, Creep Tester, Oil Extractor, Wire cut EDM, specimen preparation facilities, stir casting furnace and Induction furnace. The centre also encourages collaborative research work with other Institutions, Universities and Industries.

### **OBJECTIVES:**

1. To impart knowledge on material science and engineering to the student Community.
2. To carryout quality and ethical research in the field of materials and material Processing engineering.
3. To help the industries in solving problems that they face in metallurgy and related areas through consultancy services.
4. To lend a helping hand for Students, Research Scholars, Faculty members across the country in completing their project related to materials ,materials processing and testing.
5. Development and research on new materials.

## Facilities available for regular class work, project, research and consultancy

- Metallurgical microscope with Image analyser
- Pin-on-disk wear monitor and tester
- Microhardness tester
- Ultrasonic flaw detector
- Tensile testing machine
- Four ball tester
- Fatigue Strength Tester
- Creep Tester
- Oil Extractor
- Wire cut EDM
- Specimen preparation Grinder & Polishing machine
- Stir casting furnace
- Induction furnace

## Industry matching equipment's

### Major Equipment's / Instruments /Testing Facilities

#### 1. STIR-CASTING FURNACE



#### 2. MICRO HARDNESS TESTER



### 3. PIN-ON-DISC MACHINE (TRIBOMETER)



### 4. FOUR BALL TESTER



## 5. FATIGUE & CREEP TESTING MACHINE



## 6. WIRE CUT ELECTRIC DISCHARGE MACHINE





## 7. INDUCTION FURNACE



## 8. COMPUTERIZED UNIVERSAL TESTING MACHINE



## 9. ULTRASONIC FLAW DETECTOR



### Lab in charge:

Dr. D.S.Robinson Smart, M.E., Ph.D., Professor



### Lab Technician:

Mr. Deva Manoharan , D.M.E., B.E., Engineering Technician

