

# INDUSTRIAL VISIT REPORT

**Department:** Electrical & Electronics Engineering (EEE) and Electronics & Communication Engineering (ECE)

**Industry Visited:** Keltron (Kerala State Electronics Development Corporation), Thrissur

**Date of Visit:** November 29

## Introduction

An industrial visit was organized for the students of Electrical & Electronics Engineering (EEE) and Electronics & Communication Engineering (ECE) on November 29. The visit was aimed at providing practical exposure to electronic manufacturing processes, industrial workflows, and real-world applications of transducers used in various sectors.

## Journey & Attendance

The students assembled at NCERC and departed at 9:45 AM in two separate buses for the EEE and ECE departments. The journey was lively and enjoyable, with music and interactive activities among the students. The visit was accompanied by HOD, Deepa Ma'am, Haritha Ma'am, Anooja Ma'am, and Nithin Sir, who ensured proper guidance, discipline, and coordination throughout the trip.

The team reached Keltron, Thrissur at 11:30 AM.

## Keltron – About the Industry

Keltron (Kerala State Electronics Development Corporation) is a renowned state-owned electronics manufacturing organization. The Thrissur unit of Keltron specializes in the production and testing of various types of transducers used in industrial, medical, communication, and defence applications.

## Main Session – Transducers Production Unit

### 1. Types of Transducers

- Resistive Transducers
- Inductive Transducers
- Capacitive Transducers
- Piezoelectric and Electromagnetic Transducers
- Temperature Sensors
- Pressure Sensors
- Level and Flow Sensors

### 2. Manufacturing Process

- Raw material preparation
- Coil winding and assembly
- Soldering and internal wiring
- Calibration and sensitivity adjustment
- Encapsulation and final finishing

### 3. Testing and Quality Control

- Functional testing of transducers
- Sensitivity measurement
- Calibration using standard instruments
- Reliability and environmental testing

### 4. Applications

- Industrial automation systems
- Power and energy systems
- Medical electronics equipment
- Communication systems
- Aerospace and defence applications

## Navy Transducer Unit

Students were also introduced to the specialized transducers developed for Indian Navy applications. Keltron manufactures marine-grade transducers designed to operate underwater and withstand extreme pressure and harsh environmental conditions. These transducers are used in sonar systems, underwater communication, ship and submarine monitoring, and depth, pressure, and vibration sensing.

This session helped students understand the key differences between standard industrial transducers and navy-grade transducers in terms of design complexity, durability, sensitivity, and environmental resistance.

## Lunch Break

Students had lunch at the Keltron canteen at 1:30 PM. The team departed from Keltron at 2:15 PM.

## Learning Outcomes

- Observed real-time industrial manufacturing activities
- Gained understanding of transducer design, fabrication, and testing
- Connected theoretical concepts with practical industrial applications
- Learned about industrial quality standards and modern technology trends
- Experienced a professional and disciplined technical work environment

## Conclusion

The industrial visit to Keltron, Thrissur, on November 29 provided valuable technical exposure and practical knowledge on transducer production, testing procedures, and their diverse applications, including navy-grade transducers. The visit was both educational and memorable, successfully bridging the gap between academic learning and industrial practice.

