



**LOYOLA-ICAM**  
**COLLEGE OF ENGINEERING AND TECHNOLOGY (LICET)**  
Loyola Campus, Nungambakkam, Chennai-600034



**Category: Industrial Visit**

### **Report on Visit to Panickker Switchgear Private Limited**

**Date: 19.12.2019**

**Audience:** III EEE / 2017 - 2021, Mr. M. Augustine, AP/EEE & Ms. L. Ramya Hyacinth, AP/EEE

On 19<sup>th</sup> December, 2019, the students of III EEE visited Panickker Switchgear Private Limited. The Company has been in existence since 1974 and is engaged in manufacturing air and vacuum load break switches, manual and motor operated VCB's & isolators designed for indoor & outdoor applications. They also manufacture CT, PT and semi-conductor fuses of varied ratings. The range covers dropout fuse, expulsion fuse cut-out and high voltage fuses extending up to 38 kV. All the products are tested to the latest relevant IEC Standards.

The unit is primarily responsible for the assembly of high voltage Switching gear. The visit enlightened us with the various types of materials used in the construction of protection devices and their roles in reducing losses and costs. The visit helped us to understand the various methods in which breakers are assembled depending on their utility. The special features incorporated into breaker and isolator construction were explained in detail. It was fascinating to learn the insulation and medium used in the construction.

The construction and working of instrument transformers like current transformers and potential transformers was explained. The manufacturing of HRC fuse and semiconductor fuse by sifting and incorporating quartz powder was not only a visual treat for understanding the process but also made us understand the significance behind the processes followed. The breakers assembled and manufactured by this company employ SCADA and therefore does not require remote operation. The same applies to the isolators as well, but this additionally require motors. On an average, under utmost ideal conditions, their lifespan is around twenty years. In case of a breakdown or fault, DG Analysis is performed in which a sample of the gas is tested to identify the problem and depending on the results, affirmative action will be taken.

The use of Thermostatic sensors to indicate Oil and Winding Temperature was briefed. It was understood from the discussions that not all parts were manufactured; Components like Sensors were outsourced. Their products are distributed to power plants and steel plants in majority. The importance of conducting a Type Test before the product can be marketed was also explained. The type testing is done at Bangalore at an approximate cost of a crore. It was a highly enriching experience and all the more useful since the visit was in line with the contents learnt in the theoretical course Protection and Switchgear this semester. I am grateful

to our Department & the management for having arranged this opportunity for us to gain insight through such interesting industrial interactions.

*Vinnie Vargheese K / III EEE*

*Batch : 2017 - 2021*

