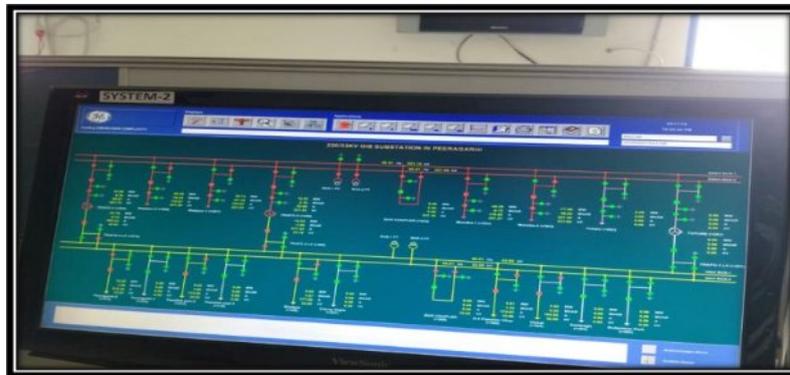


## REPORT

### INDUSTRIAL VISIT TO 220/33 KV GIS PEERAGARHI

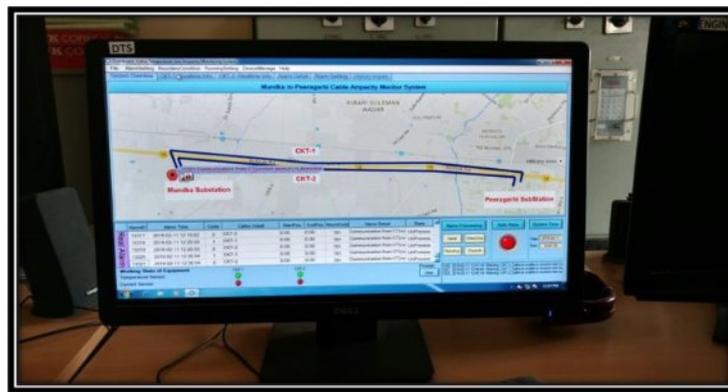
The department of Electrical Engineering, organized a one day industrial visit to DTL (Delhi Transco Limited) 220 KV GIS (Gas Insulated Substation) on 11th Feb 2016 for EEE With semester students.

DTL executive briefed about the history of that plant as it is started in May 2015 and the basic information related to it. He guided us regarding safety and precautions that has to be taken by us during on-site visit. We visited the control room of that substation which is controlled by expertise to execute commands and to control the equipments automatically when any fault occurs or for any fault location finding.



**Single Line Diagram and Main Control System**

We understood how the actual power supply is distributed and connected to the different locals of that area. All this is done automatically using SCADA software.



**Fault Location Finding Software SCADA**

Then we move forward to the next site that is 220 KV GIS building where we can operate the circuit manually if fault occurs using manually operated fault relays. This is the

second way to operate the complete system if we are unable to access the fault from the main control room. Here we got a lot of information related to relays control and the connection of 220 KV bus bar system to isolators and other equipments and its protection. The gas used for insulation is SF<sub>6</sub> or sulfur hexa- fluoride which is filled in large enclosures at 6.45 atm pressure.



**220 KV GIS Building**

After that we move out and reached the secondary side of transformer site which is energizing the 33 KV bus bar by stepping down the voltage. Here we get information about the safety and the maintenance of the transformer and its safety precautions. Then we went to the 33 KV bus bar room and took some more informative data about the system and the fault detection processes. This visit was very informative as students got familiar with the new technologies in the electricity sector and we hope that this visit will help the students.

