

SARVAJANIK COLLEGE OF ENGINEERING & TECHNOLOGY,
SURAT



BE 4th YEAR SEM 8th

ELECTRICAL (SHIFT II)

A BRIEF REPORT ON THE INDUSTRIAL VISIT OF
ASEA Brown Boveri(ABB), VADODARA



Visit to ABB, Vadodara

by

Electrical Engineering Department, SCET



Date of Visit: 11th Feb, 2016

No. of Students: - 48

Year:- BE 4th Sem 8th Electrical(Shift II)

Faculty Members:

1) Prof. Urvi T. Jariwala

2) Prof. Ami N. Vyas

3) Prof. Tejas Patel



ABB Group:

- ABB is a global leader in power & automation technologies. It is an industry of Electrical equipment founded in 1988 through merger of ASEA of Sweden and Brown, Boveri & Cie of Switzerland.
- It is the world's largest builder of electricity grids and is active in many sectors.
- Its core business being in **Power and Automation** technologies.

Products offered

- Control systems
- Power cables & Cable accessories
- Drives, inverters & converters
- Electric vehicle charging infrastructure
- Generator circuit breakers
- High voltage products
- Shunt reactors
- Transformer components
- Transformers
- Turbocharging
- UPS & Power Conditioning
- Motors & Generators
- UPS & Power conditioning
- Robotics
- Insulation components
- What we have visited on site?

We are visited ABB's Demo Room where different models of circuit breakers, motors, generators, numerical relays and bellows with their cut section are provided to observe their construction and to understand their operation.

- On load tap changer, Type: UCGRN 380/3000.
- Capacitor: Type: CHD
 - Rated Voltage: 11 kV
 - Rating: 600 kVAR
- Relay unit.
- Control panel.
- Process Automation.

After visiting demo room, we visited outside site, where different circuit breakers equipment are installed for understanding their appearance and learned to identify different type of equipment which are similar in looking.

- Transformers:
 - Current Transformer:
 - Rated voltage: 245 kV
 - Current 600 A
 - Capacitor Voltage transformer
 - Rated voltage: 245 kV
 - Transformer Bushings:
 - Rated Voltage: 145 kV, Current:1250 A
 - Power transformer:
 - Voltage ratio: 132 kV / 33 kV.
 - Traction transformer used in locomotives.
- Disconnecter: 145 kV, 1600 A.
- Circuit Breaker:
 - Type: ELFSL4-1
 - Rated voltage: 245 kV.
 - Rated Current: 2800 A.

At last, we have a PPT session, where we got the information about ABB groups, their projects, galleries, etc.

- **Few points which are included in PPT:**
 - Power Grid (Electrification)
 - Process Automation

- ABB Technology
- HVDC transmission
- Shunt Reactor
- PGCIL
- Turbo Charging

Photo gallery:

1) ABB Electrical Motors: - Rating – 0.5 to 1000 kW





ABB

2) Different Capacity of SF₆ Circuit Breakers



3) Switchyard



4) Demo Room, ABB



5) Horizontal Centre Break Disconnecter

Rated Voltage: - 145 kV

Rated Normal Current: - 1600 A



6) Group photo at R & D & Training Centre, ABB, Vadodara.

