INDUSTRIAL VISIT REPORT
OF
ELECTRIC LOCO-SHED, BARODA
ON
12TH MARCH 2015

VISIT CO-ORDINATOR:
PROF. HIRAK SHAH

VISITED FACULTIES:
PROF. HELLY PATEL
PROF. MAMTA SOLANKI
PROF. MITAL PATEL

H.O.D: PROF. RONAK PATEL

DEPARTMENT OF ELECTRICAL ENGINEERING
GROW MORE FACULTY OF ENGINEERING
Industrial Visit plays a vital role for the Engineering Students to showcase all the real working environments of the equipment, machinery, construction and its operation and every other thing that students will come across in their respective field.

The department of Electrical Engineering, Grow More Faculty of Engineering, Himatnagar organized an industrial visit to “Electric Loco Shed, Vadodara” on 12th March 2015 for 3rd Year Degree Electrical Engineering students. The visit was organized as per GTU university guidelines and recommendations regarding syllabus of Electrical Engineering.

Our main purpose for this visit was that the students improve their practical knowledge and get benefited their theoretical knowledge in Electric Traction subject which they studied in last semester.

With a deep sense of gratitude, the department wish to express sincere thanks to our In-charge Principal Prof. Bharat D. Suthar who has been a great source of inspiration and enthusiasm in organizing such industrial visits. The visit was organized with the prior permission of our principal Dr. Samir Patel. Last but not least the department is very much grateful in thanking Grow More Foundation for providing us with the transport facility.

A total 34 students of 3rd Year (6th Semester) Electrical visited Electric Locoshed. The visit was supported by Electrical H.O.D Prof. Ronak Patel & Visit Co-ordinator Prof. Hirak Shah along with Prof, Helly Patel, Prof. Mital Patel & Prof. Mamta Solanki.

On 12th March, 2015 at 05:00 AM, the students along with the faculties started their journey from Motipura, Himatanagar.

At 09:00 AM, they reached Vadodara, where first the students were given breakfast.

At 09:30 AM, all the students entered Electric Loco Shed with all the Faculty Members. The visit started with welcome address by Mr. Pradip Gupta, Principal of Z.E.T.C Locoshed Vadodara (Zonal Electric Training Centre). The Students were given some basic information and some rules by Mr. P.K. Negi Chief Instructor.

The visit was divided in 3-Sections basically:

i. Electric Loco Model Room

ii. Train Lighting Systems & Air Conditioning Systems

iii. Traction Distribution (T.R.D) of a Loco Motive
Firstly, the Electric Loco Model Section was guided by one of their instructor Mr. Jayesh Parikh. A brief introduction about Loco Motive and its working was explained to the students. He also explained the various parts of an Electric Loco-Motive.

MODEL OF INDIAN LOCOMOTIVE CLASS WAG-5

MR. JAYESH PARIKH EXPLAINING ABOUT LOCO MOTIVE WORKING
After the explanation, one of the students himself started and drove the Electric Loco Motive. Many other students also tried and made the practical run of the Electric Loco Motive. Thereafter, the students went to the other section which was about Train Lighting Systems and Air-Conditioning System of a Loco Motive. This Section was guided by Mr. Divyang Master, Instructor of Loco Lighting Systems.

**MR. DIVYANG MASTER EXPLAINING ABOUT THE TRAIN LIGHTING SYSTEMS**

The main points discussed during visit to Electric Loco Shed were:

- Basic Working & Construction of an Electric Loco Motive
- Various Indian Electric Loco Motive Class WAG-5 & WAG-7
- Working Principle & Applications of all the equipments in a Loco Motive.
- Train Lighting Systems & Air Conditioning Systems
- Details regarding Traction Distribution Systems

The following various parts of Indian Loco Motive which were explained are:

- Traction Motor
- Transformers
- Rectifiers
- Pantographs
- Smoothing Reactor
- Sandboxes
- Auxiliaries
- Compressors, etc.
After covering that section, the students finally went to Traction Distribution Model Room where all the equipment related to Traction Distribution Systems were explained by Mr. Jayesh Parikh.

**STUDENTS IN THE ELECTRIC TRACTION DISTRIBUTION MODEL ROOM**

Finally the visit was completed at 01:00 PM with the discussion session. Thus the students enhanced their knowledge on Electric Traction Systems. Thus the Students got a chance understand the subject matter regarding Electric Traction Systems. The Faculties along with students would like to extend the gratitude to the staff of Z.E.T.C of Loco Shed for the permission and support they gave to make our visit a success. After the visit, the students were given Lunch and thereafter they went to Ajwa Garden for some leisure and rest. Finally the students returned at 07:00 PM from Vadodara.

**STUDENTS & FACULTIES AT AJWA GARDEN**
STUDENTS FEEDBACK:

Finally some students also shared their experiences during visit. They thanked the departmental staff for organizing such an informative visit. This Industrial visit to Electric Loco Shed organized by Department of Electrical Engineering was very informative and with enjoyment also. We hope that this visit will help us in our future practical life and bring a positive change in our thinking and practical behaviour regarding Education and specially Engineering.

- Got to know many amazing Facts regarding Electric Loco Motive. Never knew an Electric Loco Motive which we see on Tracks would have such a difficult operation. For me it was an amazing experience.
  - Thakur Chandan (120560109030)

- Whoaa…Simple Amazing, Got the Experience of driving a Railway Engine Model. It was an awesome and a memorable moment for me.
  - Jaiswal Ankit (120560109027)

- In our Industrial Visit, we came to know about many interesting things about Electric Traction and Indian Railways. For me, it was a superb experience to visit Electric Loco Shed.
  - Vihol Ajay (130560109014)

- 12th March 2015 was a Day full of Knowledge, Enjoyment & Friendship for me. It was really a wonderful experience to visit Gujarat’s Largest Loco Shed of Western Railway. One of the most memorable visits of my life.
  - Suthar Upendra (120560109059)