

INTERNSHIP REPORT OF 5th SEM B. Tech. (EE)

A 15 days Industrial Internship was organized for Vth semester EE students of J.C. Bose University of Science & Technology, YMCA, (JCBUST, YMCA) in collaboration with alumni of Electrical Department, JCBUST, YMCA. These alumni are established entrepreneurs of Electrical Engineering field. MOU's have also been signed with two industries namely **Belz Instruments** and **Fuji Gemco**. The internship was planned to provide industrial platform to students for their bright future in industry.

The list of industries which provided Internship is given as under:

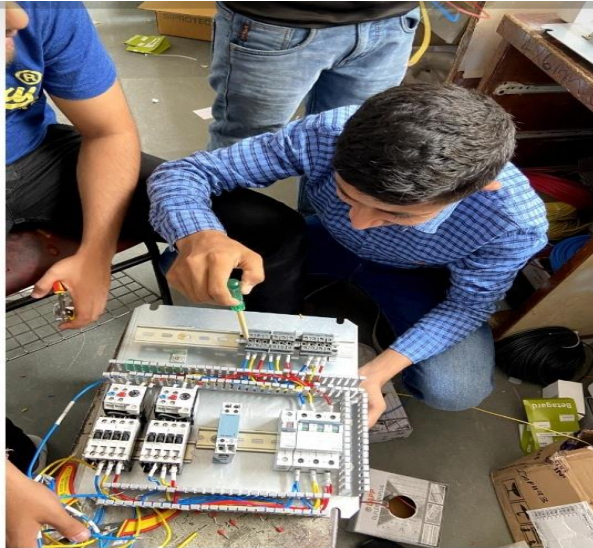
S.No.	Organization name	CEO of the company
1.	AV Automation, Gurugram	Mr. Bhushan Diwan (2000 Batch)
2.	Belz Instruments Pvt. Ltd, Faridabad	Mr. A.K. Nehra (1985 Batch)
3.	Fuji Gemco, Faridabad	Mr. Mahesh Sachdeva (1976 Batch)
4.	Innovic Energy, Noida	Mr. Kumaresh Soam (1992 Batch)
5.	Jindal Stainless Steel Limited, Hisar	Mr. Jagdish Singh Rautela
6.	Rhine Energy, Manesar	Mr. Sanjay Surana
7.	Norisys Technology Limited, Faridabad	Mr. P.K Arora (1981 Batch)
8.	VEE GEE Industries, Faridabad	Mr. Naveen Sood (1974 Batch)
9.	220KV substation HVPNL, Mahendergarh	Mr. Rakesh (SSE)
10.	Century Crane Engineers Private Limited	Mr. Praveen Bajaj (CEO)
11.	Jay Bharat Maruti (JBM) Ltd., Sector 36, Gurugram	Mr. Virender Singh (Head of DG Office)
12.	Nawada Substation (Bihar)	Mr. Kumar Jagdish
13.	Ultra Jet Hydrojetting Pvt. Ltd	Mr. Bajrang Rana
14.	XEN City DIVN DHBVN, Sirsa	Mr. MohanLal Jangra
15.	Encoder, India	Mr. Ravi Nangia (1979 Batch)
16.	VTech Automation, Gurugram	Mr. Ashok Bhakri (1995 Batch)
17.	National fertilizer limited	Mr. Ashutosh Gupta (EL) workshop Asstt. Manager
18.	Charkhi Dadri Substation UHBVN	Mr. Anil (XEN OP)
19.	Classic Automation	Mr. Vinay Suneja (1975 Batch)
20.	220 KV grid substation BBMB, Dhulkote	Er. Rajpal, SDO
21.	Cooperative Sugar Mills, Kaithal	Mr. Jagdeep Singh
22.	Hind Hydraulic	Mr. Sukhdev (1976 Batch)
23.	DHBVN 33KW, Panjuana	Mr. Rajesh Kumar (SDO)
24.	UFI Filter India Pvt. Ltd, Bawal, Rewari	Mr. Vaibhav
25.	Swastik Electricals, Noida	Mr. Vinod Aggarwal (Quality Manager)

The experience of students during Internship in different companies is describe below:

AV Automation

In AV Automation, students got practical information of sensors like as photoelectric sensor, inductive sensor, capacitive sensor, through beam type, retro reflexive type, diffusion type,

ultrasonic type etc. Also, they gained knowledge about weigh indicator (load cell, transmitter), temperature measurement electronic devices (thermocouple, thermometer), and closed loop control system. They also learnt about mechanical workshops like as molding, VMC machine, EDM machine, lath machine and servo motor.



Belz Instruments

In Belz Instruments, students were taught about calibration of multimeters and stop watches using masters like fluke 9100 and universal calibrator. They learnt about institutions like NPL-CSIR, BIPM, NABL and different sort of instruments such as oscilloscope, clamp meter, torque wrench, push pull gauge, RTD and standard platinum resistance thermometer.



Fuji Gemco

In Fuji Gemco, it was a great opportunity for students to learn and explore a lot about the switchgear panels and their testing using software. Students also performed the wiring of few panels. Hence, students learned a lot about the technical and practical knowledge and skills.



Innovic Energy, Noida

At Innovic Energy, students learnt about the installation, working, functioning, testing of LT and HT (11kv) panels. The students also learnt about getting order from clients, enquiries, placing requirements, preparation of quotation, preparation of BOQ etc. They also got knowledge about the process of panel construction, AutoCAD drawings, wiring, testing and dispatching the panels to the clients.



Jindal Stainless Steel Ltd, Hisar

At Jindal Stainless Steel Ltd, students understand the process of manufacturing of stainless steel. They also learnt about PLC, SCADA control panels working of conveyor drives.



Rhine Energy LLP, Manesar

This is the associated company of Innovic Energy. This company manufactures CSS, RMU and VCB HT panels up to 33KV. Students have learnt here about the functioning of RMU and CSS as well as APFC panel.



Norisys Technology Ltd, Faridabad

In Norisys Technology, students got experience in different departments like moulding, tools, assembly, quality check, and lab. In moulding, students learnt how to manufacture different parts of electric component like starter, switch, gear, socket etc. Tools is the department related to the moulding machine and students learnt here about the service of moulding machine. In quality department, they learnt about the different factors required for quality checking of all component. In assembling department, they learnt the assembling of starter, socket, switch, MCB, gears etc.



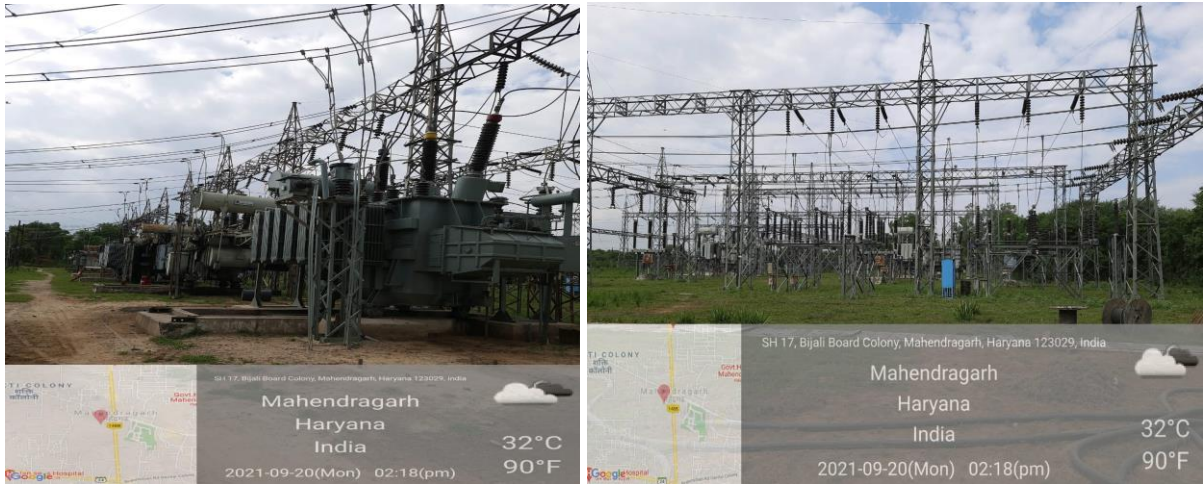
Vee gee industries Pvt Ltd

It is a manufacturing company where car parts like paddle, axle, brakes etc are manufactured and supplied to Maruti Suzuki and Honda. In maintenance department, students came to know about the robot welding and its parts, how it works and what types of safety measures should be taken to maintain its efficiency.



220KV Substation, HVPNL, Mahendergarh

Students at substation were able to get information about different parts of transformer and its safety. New knowledge of energy distribution and transmission line was also gained from substation.



Century Crane Engineers Private Limited

Here, students got the knowledge of heavy machines working in collaboration with mechanical systems and their installation. They also got the knowledge about industrial safety measures while working with huge machinery and electrical systems.

Jay Bharat Maruti (JBM) Ltd, Sector 36, Gurugram

In Jay Bharat Maruti, students learnt about ACBs, VCBs, panels and SLDs. They also learnt about the working of plant substation.

Nawada Substation (Bihar)

The internship at Nawada Substation, students get practical knowledge related to 33/11KV substation. The students understand the function of components used there such as circuit breaker, isolator, lightning arrester, bus bar, power transformer, distribution transformer, control and relay panel.



Ultrajet Hydrojetting Pvt. Ltd

Students performed jobs on lathe and drilling machines. They also gained knowledge in electrical field on a pressure machine, starting of motor, OLR (overload relay), MCB etc used in the machine.



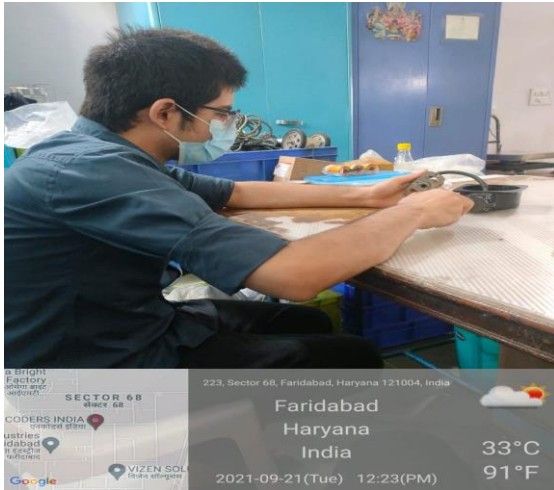
XEN City Divn DHBVN, Sirsa

In DHBVN substation, Sirsa, students were able to explore how 33 KV-3 phase power supply can be stepped down using step down power transformer and then this stepped down 3phase supply is used in our households by distribution lines. They also gained knowledge about various high tension and low-tension fuses.



Encoder India

At Encoder India, students learned various aspects of transformers, resistor, capacitor, encoders, switches, and relay.



VTech Automation, Gurugram

In VTech Automation, students learnt to design panels' body layout. In panel designing workshop, they learnt about the use of different equipments like MCB, MCCB, VFD, contactor, relay in control panels.

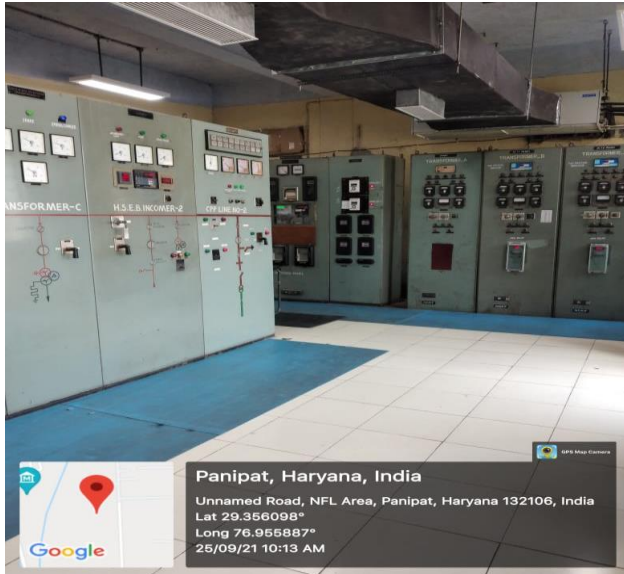


National Fertilizer Ltd

It has its own captive power plant (CPP) to generate power further supply to

1. Ammonia plant
2. Urea plant
- 3 Workshop
- 4 Dummy
- 5 Township

At, National Fertilizer Ltd, students were able to understand the whole process of fertilizer manufacturing.



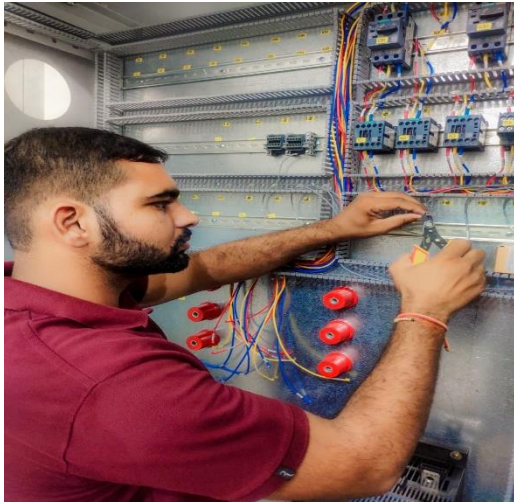
Charkhi Dadri Substation, UHBVN

At Charkhi Dadri substation, students were able to get information about various parts of transformer, its safety and working. New knowledge of energy distribution and transmission line was also gained from substation.



Classic Automation, Faridabad

At Classic Automation, students were able to learn about the designing of electrical panels used to operating motors in industry. The students also gained knowledge about Variable frequency drive (VFD), soft starters, different switchgear and protection equipments like MCCB, MPCB, SPP etc.



220 KV Grid Substation, BBMB, Dhulkote

Here, students gained great experience/knowledge of LA, IDMT relays and protection part of CC room, wave trap, ACSR conductors, and mesh operating system of substation.



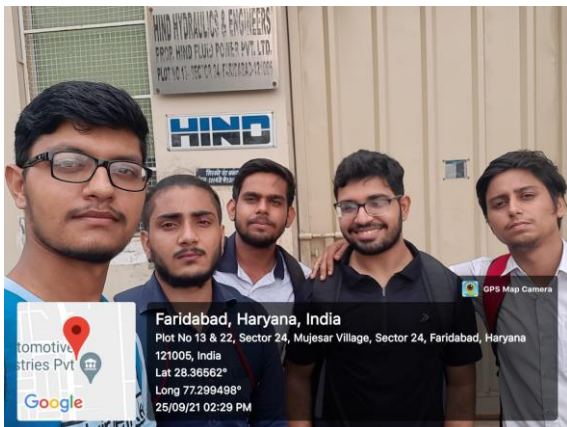
Cooperative Sugar Mill, Kaithal, Haryana

At Cooperative Sugar Mill, Kaithal, students learnt how energy is produced in sugar mill using various types of equipment like boiler, turbines, alternator, and protective devices. Students also learnt about working of star-delta connection, alternator, and VFD. Different types of AC and DC motors used for different purposes were also understand.



Hind Hydraulic

At Hind Hydraulic, students learnt about DOL starter, star-delta starter, and reverse forward starter. They also learnt about AutoCAD, electrical symbols, variable frequency drive, and servo drives.



DHBVN 33KV, Panjuana

In 15 days training at DHBVN 33KV, Panjuana, students were able to understand about potential transformers, current transformers, vacuum circuit breakers, feeders, power transformers, high tension and low tension fuse. They also understand how to create fault and corrected in substation.



UFI Filter India Pvt. Ltd Bawal, Rewari

UFI Filters' mission is to create innovative and sustainable solutions in filtration and thermal management systems. UFI Filters puts customers first and aims to provide them with exceptional quality products to enhance the efficiency of their applications. The whole process was explained to students.

Swastik Electricals

Swastik electricals is known for innovation, timely delivery of high quality motors for washing machine and other FHP motors. Students were given hands on training on different types of motors.

