

A Report on 4 days Industrial Internship at  
**'Pethe Brake Motors, Modka Agar, Guhagar'**

By

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&

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**Group-1**

*Wednesday, 5<sup>th</sup> January 2022 to Saturday 8<sup>th</sup> January 2022*

## **Report**

Above 2 faculties and 1 staff of Department of Electrical Engineering have successfully completed 4 days Industrial Internship at Pethe Brake motors, Modka Agar.

Generally Internships in such industries are carried out for students in order to have practical knowledge. But above faculties also completed internship in order to get clear cut view of Electrical Machines Design especially three phase induction motor and some other important facts of Electrical Machines. Day-wise report of internship is summarized herewith.

### **Day one (Wednesday 5<sup>th</sup> January 2022)**

We reported company on above date at morning at 9:30 am. As it was the first day, Industry experts shown us entire company campus and we got well familiar with all the departments, their in-charge, supervisors and Managers. It was like 'Induction training.' After visiting all the departments, finally we got handover to Electrical Engineering Department.

In Electrical Department, we have shown how Motor high voltage testing is carried out. This high voltage testing is carried out in order to measure the insulation resistance and reliability of insulation. 2000 volts are applied to the motor terminals and test is performed.

Also we have shown how winding is performed, how coils are made, how wire gauge is determined, various Indian standards of motor dimensions etc.

### **Day Two (Thursday 6<sup>th</sup> January 2022)**

We reported at company at 9:30 am morning. We met to Mr. Dipak Katdare. Mr. Katdare explained us company product and its importance, its applications. Mr. Katdare also shown us various books

and manuals of Indian standards which their company is being referred for manufacturing. After his informative introduction, we reported Electrical Department and started our hands-on session. We have given one 3 phase induction motor (0.75 kW / 1 HP) for its complete wiring and making entire stator assembly. We were having 3 entire days to perform this task. We started our hands-on by making paper insulations. We made total 36 insulations and after that we inserted those insulations in 36 slots of stator.

In afternoon session, we have shown how varnish is applied on 3 phase induction motor in order to make its insulation even stronger. Also its heating process is shown. The entire session was so much fruitful and we were gaining lot of practical knowledge.

At the end of this day, we were able to make total 12 slots with winding inserted in it.

### **Day Three (Friday 7<sup>th</sup> January 2022)**

Our hands-on session continued on third day also. On this day, we were shown actual load test of 3 phase induction motor. Water pump is used as a load and completely assembled motor is loaded in order to calculate its full load current, torque, no load current, power factor, current in all 3 phases, voltage etc. all parameters. This was the final test of motor before selling. All the readings were recorded and compared with standard readings. The motor which passed this test with accurate matching with standard readings only gets ready for selling. This is the secret key of standard of their product.

After watching this all testing, we again moved towards our hands-on session and we completed almost 34 slots in this whole day with winding.

### **Day Four (Saturday 8<sup>th</sup> January 2022)**

On this day, we completed our entire winding work and handover motor to them. It was tremendous hands-on experience regarding winding. Work was very difficult, but skillful. We understood that only practice can make it perfect.

Afterwards we also seen how brakes are made and how those brakes can able to stop the motor suddenly. Brake testing is also shown to us. Various programmed machinery and skill of company employees was literally joy to watch.

Finally we met again to Mr. Dipak Katdare and we were thankful to him for giving us so much wonderful opportunity to perform some hands-on work in their esteemed organization.

In this way our internship work was fruitfully completed.

Some photographs are herewith.



8 Jan 2022 14:18:00  
pethe brakes  
Index number: 104



6 Jan 2022 11:22:54  
pethe brakes  
Index number: 61



6 Jan 2022 14:32:23  
pethe brakes  
Index number: 68



6 Jan 2022 11:26:13  
pethe brakes  
Index number: 64



**Mr. Katdare Yogesh Y.**  
**Industrial visit coordinator**

**Mr. Satish N. Ghorpade**  
**HOD.**



A Report on 4 days Industrial Internship at  
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By

Ms. Minal Kokare

Mr Ketan Oak

&

Ms. Priti Sathe

*Faculties and staff*

**Department of Electrical Engineering,**

**VPM's MPCOE, Velneshwar**

**Group-2**

*Wednesday, 5<sup>th</sup> January 2022 to Saturday 8<sup>th</sup> January 2022*

## **Report**

Above 2 faculties and 1 staff of Department of Electrical Engineering have successfully completed 4 days Industrial Internship at Pethe Brake motors, Modka Agar.

Generally Internships in such industries are carried out for students in order to have practical knowledge. But above faculties also completed internship in order to get clear cut view of Electrical Machines Design especially three phase induction motor and some other important facts of Electrical Machines. Day-wise report of internship is summarized herewith.

### **Day one (Wednesday 19<sup>th</sup> January 2022)**

We reported company on above date at morning at 9:30 am. As it was the first day, Industry experts shown us entire company campus and we got well familiar with all the departments, their in-charge, supervisors and Managers. It was like 'Induction training.' After visiting all the departments, finally we got handover to Electrical Engineering Department.

In Electrical Department, we have shown how Motor high voltage testing is carried out. This high voltage testing is carried out in order to measure the insulation resistance and reliability of insulation. 2000 volts are applied to the motor terminals and test is performed.

Also we have shown how winding is performed, how coils are made, how wire gauge is determined, various Indian standards of motor dimensions etc.

### **Day Two (Thursday 20<sup>th</sup> January 2022)**

We reported at company at 9:30 am morning. We met to Mr. Dipak Katdare. Mr. Katdare explained us company product and its importance, its applications. Mr. Katdare also shown us various books

and manuals of Indian standards which their company is being referred for manufacturing. After his informative introduction, we reported Electrical Department and started our hands-on session. We have given one 3 phase induction motor (1HP/1500 RPM,106 turns and SWG 23) for its complete wiring and making entire stator assembly. We were having 3 entire days to perform this task. We started our hands-on by making paper insulations. We made total 36 insulations and after that we inserted those insulations in slots of stator.

In afternoon session, we have shown how varnish is applied on 3 phase induction motor in order to make its insulation even stronger. Also its heating process is shown. The entire session was so much fruitful and we were gaining lot of practical knowledge.

At the end of this day, we were able to some slot with winding inserted in it.

We have shown hydraulic testing method which is used for brake motor testing

### **Day Three (Friday 21<sup>th</sup> January 2022)**

Our hands-on session continued on third day also. On this day, we were shown actual load test of 3 phase induction motor. Water pump is used as a load and completely assembled motor is loaded in order to calculate its full load current, torque, no load current, power factor, current in all 3 phases, voltage etc. all parameters. This was the final test of motor before selling. All the readings were recorded and compared with standard readings. The motor which passed this test with accurate matching with standard readings only gets ready for selling. This is the secret key of standard of their product.

After watching this all testing, we again moved towards our hands-on session and we completed all the winding in this whole day. At the end of this day we have shown brake test by using electromagnetic testing method using disc brakes.

### **Day Four (Saturday 22<sup>nd</sup> January 2022)**

On this day, we completed our entire winding work and handover motor to them. It was tremendous hands-on experience regarding winding. Work was very difficult, but skillful. We understood that only practice can make it perfect.

Afterwards we also seen how brakes are made and how those brakes can able to stop the motor suddenly. Brake testing is also shown to us. Various programmed machinery and skill of company employees was literally joy to watch.

Finally we met again to Mr. Dipak Katdare and we were thankful to him for giving us so much wonderful opportunity to perform some hands-on work in their esteemed organization.

In this way our internship work was fruitfully completed.

Some photographs are herewith.







**Mr. Katdare Yogesh Y.**  
**Industrial visit coordinator**

**Mr. Satish N. Ghorpade**  
**HOD**