RAJEEV INSTITUTE OF TECHNOLOGY
Plot # 1 (D), Growth Centre, Bangalore-Mangalore Bypass Road, HASSAN- 573 201, KARNATAKA
(Affiliated to VTU, Belagavi., Approved by AICTE, New Delhi., Recognized by Govt. of Karnataka)

Department of Electrical and Electronics Engineering

A REPORT ON ONE DAY INDUSTRIAL VISIT:

Place of Visit:

KAMATH Transformers Private Limited
Plot No.4-DEF, Survey No. 98, KIADB Industrial Area, Yedenahalli, Sompura Hobli, Dobaspet, Nelamangala Tq, Nelamangala Town, 562 111, India

Date of Visit: 16th December 2023.

Students Participated: EEE II Year and Final year students

Department of Electrical and Electronics Engineering, Rajeev Institute of Technology, Hassan (RIT Hassan) organized an industrial visit on 16th December 2023 to Kamath Transformers Private Limited, Dobaspet, Nelamangala Tq, Nelamangala Town, Bangaluru Rural 562 111, India.

For students of the EEE Department from RIT Hassan (Second year and Final Year). The visit was organized with prior permission and guidance of Dr. Pradeep KGM , Head of Department. Total 46 students along with HOD of EEE department Dr. Pradeep KGM faculty members Mr. Velu A and Mrs. Rashmi N as coordinators visited the same.

We started from the college at 7:30 AM. And it took us approximately three hours to reach our destination via College transport.

The main objective of the visit was to know theoretical terms with industrial (practical) exposure and working of Kamath Transformers. An engineer's Mr.Harish, Mr.Mohith and supporting staffs at Kamath transformers welcomed all of us at the entrance and took us in batches to explain the various manufacturing process and working of Transformers in detail.

We would like to thank Managing Director of Kamath Transformers Pvt.Ltd. Shri.K.V.Kamath sir for his valuable time and guidance to our students.

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COMPANY PROFILE:

Kamath Transformers Pvt. Ltd , established in 1994, is a renowned and progressive company in transformer manufacturing. The company manufactures world-class quality and trusted transformers and is a leading transformer manufacturer within the country. The company emphasise on technology, product quality, safety, expertise and delivery performance in all its activities, to ensure a competitive edge and leadership in the market.

The hallmark of Kamath Transformers Pvt. Ltd is quality. Every Kamath make "Lakshmi" brand rolled out is a manifestation of our commitment to quality and reliability. Our products are tailor made to customer's requirements within our state-of-the-art manufacturing facility and are tested in accordance with IS/IEC Standards.

Our core value is directed towards satisfying our customer's needs through continuous improvement and innovations. We've always try to introduce new technology for improving the efficiency and effectiveness of our transformers. We have dedicated employees and exceptional team of engineers who work hard to deliver the best product and to exceed customer expectations.

Kamath Transformers Pvt. Ltd (KTPL) was established in 1994. Since then, it is a well-established and progressive company in transformer manufacturing. Kamath Products is the name for quality transformers. Our company's name has become synonymous with world-class quality and trusted Transformer Manufacturers within the country. Our exceptional team of engineers and dedicated employees have helped us in earning that reputation.

The hallmark of Kamath Transformers Pvt. Ltd is quality. Every Kamath make "Lakshmi" brand rolled out is a manifestation of our commitment to quality and reliability. As a Transformer Manufacturers in India, we have considerable experience in this domain and that's the reason for the trust we have gained from hundreds of our esteemed clients. Our products are tailor made to customer's requirements within our state-of-the-art manufacturing facility and are tested in accordance with IS/IEC Standards. The most eminent companies and corporations buy from us and put their trust in our transformers. This list of elite companies is enough to reflect our capabilities and expertise.

Whether you need a Step-up Transformer or a Step-down Transformer, we have it all, that's why we are consider as a notable Transformer Manufacturers In India. You can find any type of transformer in our inventory and we plan to expand this inventory consistently to meet the requirements of the market. We've always tried to introduce new technology for improving the efficiency and effectiveness of our transformers. Our company's name is counted among the foremost Transformers Exporters and Suppliers In India. So, don't go anywhere else to buy excellent and flawlessly finished transformers.

The Company emphasis on expertise, technology, safety, systems, product quality and delivery performance in all its activities, so that we achieve a competitive edge and leadership in the markets we serve. The major resources of KTPL is directed towards satisfying our customer's needs through continuous improvement and innovation within our distribution, power, and services businesses.

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Kamath Transformer manufactures, exports and supplies efficient range of Power and Distribution Transformers, Inverter Duty Transformers, Earthing Transformers and special types of Transformers. These products are presicisely engineered and manufactured in our maunfacturing facility. Some of the highlights of our facilities are:

- KTPL Plant has 2 acre of land & built up area of 60000 sq.ft.
- Power Transformers up to 50 MVA in 132 kV class
- Pressurized Winding area – to minimise dust particles
- 3-7.5 ton capacity horizontal winding machines

- Dedicated crane for winding section
- 10 ton, 25 ton and 40 ton cranes to lift biggest size transformer easily
- Main Bay 75 m long x 19 m wide, lean to area 7 m wide
- Special Application Transformers

OBJECTIVES OF THE INDUSTRIAL VISIT:

1. To understand theoretical terms with industrial (practical) exposure and working of Transformers.
2. To assemble laminated steel to make core assembly (shell type transformer)
3. To develop LV winding and HV winding in transformer.
4. To design of transformer according to consumer specifications.

OUTCOME OF THE INDUSTRIAL VISIT:

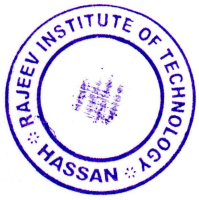
As per the university curriculum, subject related to Transformer was framed. For better practical understanding of transformer in details this field exposure visit is arranged and completed to fill curriculum gap between Institution and Industry.

At the end of the Industrial Visit student will be able to learn the following comcepts:

1.Basic Parts of a Transformer: 1) Laminated core 2) Windings 3) Insulating Materials 4) Transformer oil 5) Tap changer 6) Conservator 7) Breather 8) Cooling tubes 9) Buchholz Relay 10) Explosion vent Core: The core is used to support the windings in the transformer. (Demonstrated)

Cold-rolled grain-oriented (CRGO) steel is used for the manufacture of transformer core. It has low magnetic hysteresis loop area, which minimizes magnetic losses & high silicon content which leads to high resistance, decreasing eddy current losses. So, overall losses are reduced.

Core Assembly: It consists of: 1) Core made up of CRGO steel. 2) Core bolt 3) Three limbs 4) Top Yoke and Bottom yoke 5) Tie rod 6) LT & HT Windings WINDINGS:- LT Windings are connected in star and HT Windings are connected in Delta. (Demonstrated)



Enamel is used to insulate the windings of low voltage transformers.
For power transformers, **paper insulation** is used for winding wire as well as in the form of strips of paper insulation between winding layers.

Helical winding: We use helical winding where we need to draw more current. (Demonstrated)

Conservator Tank: It is placed on the Mils Steel Tank and is filled with Transformer Oil.

Breather Pipe: It is used to carry moisture-free, dry air into the tank. Equalizer Pipe- It is used to equalize pressure. The expected life of a transformer is 20-25 Years. Testing Lab is used for the Health check of the transformers. (Demonstrated)

Testing of transformer: Demonstrated briefly about various types of tests in Transformers.

Buchholz Relay: It is connected between the Conservator tank and Transformer tank. Explosion vent pipe: It is the top-most and weakest part of the transformer to ensure transformer protection. A very thin brass metal is used which breaks if there is any fault in the transformer. (Demonstrated).



We started from the RIT Hassan , at 7:30 AM on 16.12.2023(Saturday)

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Er.Harish sir and Er.Mohith Sir from Kamath Transformers Pvt.Ltd. sharing his knowledge to students of EEE department, RIT Hassan. About wounding of Low voltage foil according to consumer specifications sheet.



Managing Director of Kamath Transformers Pvt.Ltd. Shri.K.V.Kamath sir, sharing his knowledge to students of EEE department, RIT Hassan.

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Department of Electrical and Electronics Engineering, Rajeev Institute of Technology, Hassan (RIT Hassan) has signed MOU with **Kamath Transformer PVT.LTD.,** on 16.12.2023



Industrial Visit Banner

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