

**K. K. Wagh Institute of Engineering Education
Research, Nashik
Department of Electronics & Telecommunication Engineering
AY: 2022-23
Industrial Visit Report**

Name of Industry Visited:	'The Motwane Manufacturing Company Pvt. Ltd.'
Address of Industry Visited:	Gyan Baug, Nashik Road Sane Guruji Nagar, Nashik - 422101, Maharashtra
Date of Industrial Visit:	9 th November 2022,(10:30am to 12:30pm)
Target Participants:	students of (Electronics)
Number of Participants:	68 students of TE-Div.B (Electronics and Telecommunication) + 2 staff members
Name of Course for which Industrial Visit Organized:	SKILL DEVELOPMENT
Name of Visit Coordinator:	Prof. A.B.Suryawanshi
Name of Instructor:	Mrs. Yogita Pawar (Head-Manufacturing Engineering Department)
Outcome of Industrial Visit:	Students will be able to understand PCB manufacturing and different testing technologies and machineries. (This outcome is mapping to PO1, PO2, PO3, PO5, PO12)

About Visited Industry:

The third-year students of Electronics and telecommunications department of K. K. Wagh Institute of Engineering Education and Research visited **Motwane Manufacturing Co. Pvt. Ltd.** as a part of their skill development curriculum on 9th November 2022. The respective staff members were present with the students.

The students were welcomed by the staff members of 'The Motwane Manufacturing Company Pvt. Ltd.' The first section students were introduced were the goods arrivals and store.

The process of receiving and dispatching various materials that come and go in the manufacturing unit was explained. The specialized stickers that help identify the class of the received good were shown to the students and their use was demonstrated. With physical identification, software system known as SAP is also used in maintenance of the record of the storage of all components and units.

The next department was the storage. The manufacturing unit receives various components and different types of goods on a daily basis. The students were shown the store where all these components were stored in an organized manner. With the given array of components that are received, it is very essential to maintain a proper storage of them. All these components are carefully sorted into bins according to their usage criteria.

The department that acts as a linkage between previous two departments is quality control. All the components are quality checked before adding them into the inventory. Parameters such as tolerance, working temperature and quality are vigorously tested before certified okay for usage. Similarly, the final manufactured products that are delivered to clients are also quality controlled, with a random unit selected in every batch for testing.

The PCB manufacturing process was thoroughly explained to the students. The students were shown the entire automatic PCB manufacturing process. The panel is first applied with a glue so that the SMD components sit firm on the board before soldering. The component placement process is entirely automated where a machine is fed with the components and the board is fitted with the components. This is achieved with a program that is installed in the machine. The process ends with an oven through which the board is passed where all the components are soldered. A visual inspection is the final stage to make sure that the PCB is fit for use.

The through whole components are manually soldered by technicians and the PCB is deemed as ready to be installed into a product. Further, the screen-printing machine, quadra laser machine, and the oven that are used in PCB manufacturing were shown to the students.

The final product assembly was demonstrated to the students. The fine management that goes under the designing a PCB according to the product dimensions and the casing was explained. In the last stage, the oil testing machine manufactured by the company was put on display for the students and its working was explained thoroughly. The working principle and the actual engineering behind the operation was informative and helpful.

By the end of the visit, the students were overwhelmed with the amount of on-field knowledge gained. It was an informative visit and the students walked out of the manufacturing plant with even greater desire to explore the vastness of electronics world.

Photos of Industrial Visit:



Prof. Anuja B. Suryawanshi
Industrial Visit Coordinator