

Report on Industrial Visit
to
Man Made Textiles Research Association, Surat
on
28th March, 2025

Sarvajanik University
Sarvajanik College of Engineering & Technology, Surat
Department of Information Technology

Purpose of the industrial visit

Students of B.Tech.(Information Technology), SCET visited the Man Made Textiles Research Association (MANTRA), situated at Ring Road, Surat on 28th March, 2025. The primary purpose of the visit was to give students exposure to variety of research based applications undertaken at MANTRA. The visit also aims to bridge the gap between students' theoretical knowledge of subjects and their industry applications.

Key details of the visit

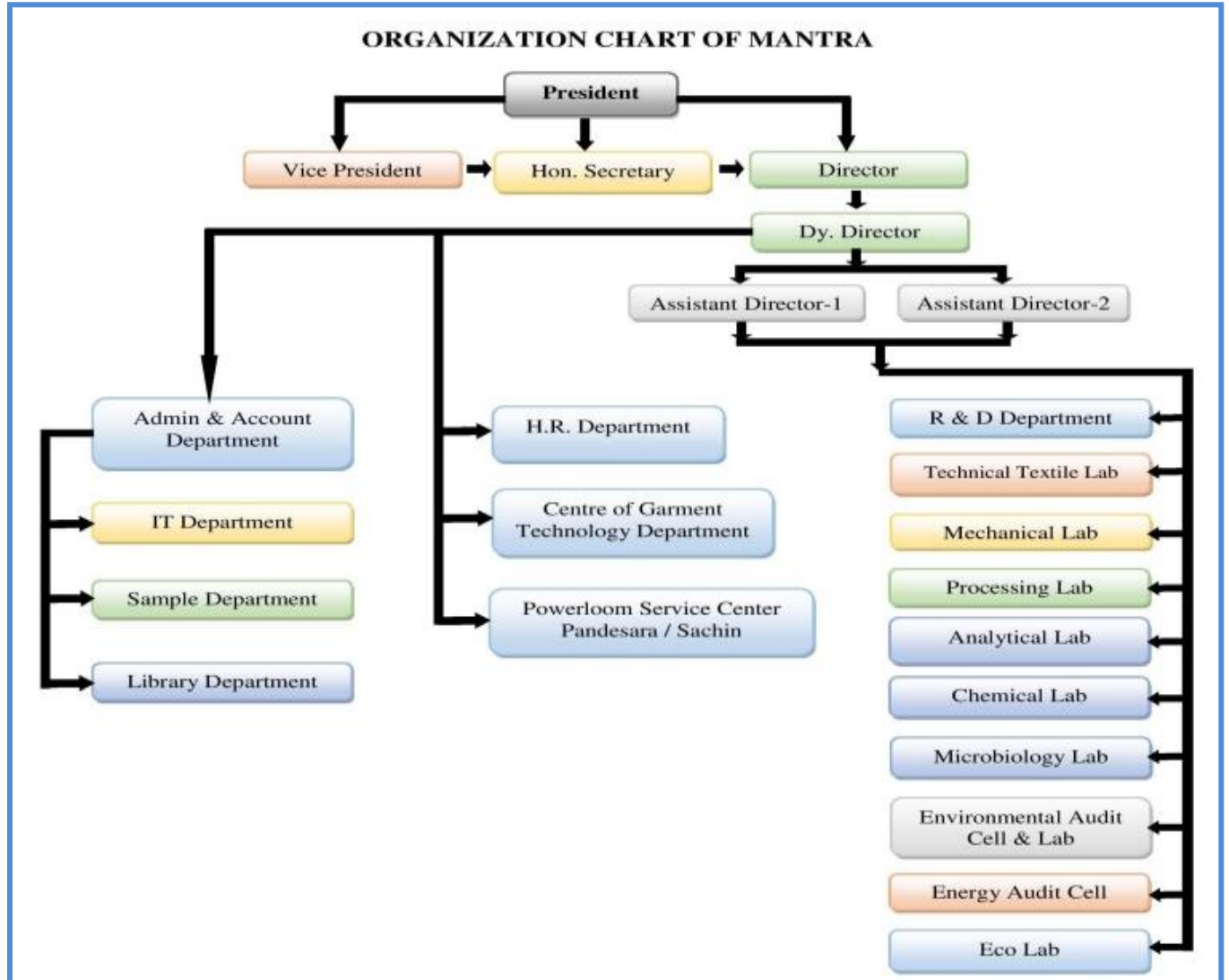
Organization visited:	Man Made Textiles Research Association (MANTRA), Surat
Date and Time:	28th March, 2025; 12:00 PM onwards
Participants:	Students of BTech (Information Technology), SCET
Faculty coordinator:	Dr. Mita Parikh, Professor, Department of Information Technology, SCET
Resource person:	Dr. Hitesh Jariwala, Deputy Director, MANTRA

About MANTRA

MANTRA, established in 1981, is one of the eight national level Textiles Research Associations (TRAs) and one of the leading TRAs in man-made fibres, approved by the Ministry of Textiles, Government of India. Mantra is also recognized as SIRO by the Department of Scientific & Industrial Research, Ministry of Science & Technology, Government of India. MANTRA is registered under Bombay Public Trust Act, 1950 and Society Registration Act, 1860. MANTRA is a premier institution dedicated to research and development in man-made fibers and textiles. It was established with a view to carry out research and development activities as well as to provide testing and technical service facilities to the man-made fiber textiles industry, in particular, and other allied industries in general, in South Gujarat.

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Organization Chart of MANTRA



Highlights of the visit

- Ms. Khushbu Gandhi, HR Executive, MANTRA welcomed the students and faculty of SCET and invited them on a tour of the premises. Students were taken on a guided tour of different laboratories by employees of MANTRA who explained to them various research projects and testing tasks undertaken on the premises.

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- Students visited the Information Technology department at MANTRA where they were informed about the features of the integrated ERP system which supported administrative tasks at MANTRA and also assisted various research tasks as well as automated testing tasks. Students were briefly imparted information about the use of their customized software for textile manufacturing, quality control with adherence to standards, minimizing wastage and maximizing throughput.
- Students visited the Chemical Lab where they were explained different quality checks for fabrics such as the Water repellency and Absorbency test, Flammability test, Colorfastness test, Antimicrobial test etc. Technicians then walked them through the steps of process for ‘Fiber-to-Fabric’ for production of textiles. Machinery and processes for the task of fiber cleaning and production were explained to them. Students were also shown samples of different fabrics.
- Students visited the Environmental Laboratory where they were briefly explained various regulations for textile and dyeing industries. They also observed various tests for micro-analysis of textiles.
- Students visited the Mechanical Laboratory where they were given information about different tests performed to determine durability of fabrics such as the Abrasion Resistance test and the Tensile test.

Interaction with MANTRA Leadership

Towards the end of the visit the student had an interactive session with Dr. Arup Rakshit, Director, MANTRA and Dr. Hitesh Jariwala, Deputy Director, MANTRA. Dr. Arup Rakshit discussed the scope and extent of textile manufacturing including consumer textiles and technical textiles. He also gave guidelines to students regarding various job opportunities in this industry for students of engineering from diverse domains. Dr. Hitesh Jariwala discussed various innovations in the textiles sector and answered queries from students regarding research and testing at MANTRA. He also stressed the role of IT sector and in particular the wide range of applications of Artificial Intelligence in textile design, defect detection and dye formulations.

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Glimpses of the Visit



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The visit to MANTRA provided a valuable opportunity to students to witness the intersection of textile technology, chemical processing and software assisted automation with an emphasis on environmental considerations.

LinkedIn post by MANTRA for this visit can be viewed here:

https://www.linkedin.com/posts/the-man-made-textiles-research-association-surat-38563bab_mantra-scet-educationalvisit-activity-7311320717759778816-86iv

Acknowledgements

We would like to thank office bearers of Sarvajanik University and Dr. Hiren Patel, Principal, SCET for their motivation in organizing the industrial visit. We thank Dr. Vivaksha Jariwala, Head, IT Department for her co-operation and assistance in arranging the visit. We sincerely thank Dr. Arup Rakshit, Director, MANTRA and Dr. Hitesh Jariwala, Deputy Director, MANTRA for their support in facilitating the visit and also for sharing their knowledge and experience during interaction with students.