



CSMSS

CHHATRAPATI SHAHU MAHARAJ SHIKSHAN SANSTHA'S

CHH. SHAHU COLLEGE OF ENGINEERING

Approved by AICTE New Delhi, DTE (Govt. of Maharashtra) and affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere. Kanchanwadi, Paithan Road, Chhatrapati Sambhajanagar 431 011 (M.S)

Ph. No. : (0240) 2646363, 2646350 Fax : (0240) 2379015

Email: shahuengg@gmail.com, principal@csmsseengg.org Website : www.csmsseengg.org



Industrial Visit Report

College Name: CSMSS Chh Shahu College of Engineering

Department: Mechanical Engineering

Industrial Visit to: Yotuh energy Pvt Ltd. Chennai

Date: 14/10/2025

Faculty In-charge: Prof. P.B.Chaudhari

No. of Students: 27

1. Introduction

Yotuh Energy Private Limited is a clean-technology startup based in India, founded in 2022, specializing in electric refrigeration systems for mid-mile and last-mile cold-chain logistics. Their core product is an electric refrigeration unit, powered by a lithium-ion battery and independent of the vehicle's main engine, designed to equip small commercial vehicles and electric vehicles for the refrigeration of perishable

This industry visit is relevant to the curriculum because it connects topics such as electrical and electronics engineering (battery systems, control systems), mechanical engineering (refrigeration cycles, vehicle integration), and logistics/supply-chain (cold-chain systems, sustainability). It gives students exposure to modern industrial design, product development, start-up culture and applied engineering in sustainable transport/logistics..

2. Objectives of the Visit

- To observe and understand how a clean-tech start up designs and manufactures refrigeration systems for cold logistics.
- To study the integration of electric battery systems, control electronics and refrigeration in vehicle-based applications.
- To interact with industry professionals to learn about current challenges and opportunities in cold-chain logistics, sustainable transport and product development in the Indian context.

3. Schedule / Activities During Visit

Time	Activity / Session	Resource Person / Guide	Remarks
12:00 PM – 12:30 PM	Welcome & Introduction	Industry Representative	Company overview, safety briefing, startup context
12:30PM – 1:30 PM	Factory / Lab Tour	Supervisor	Tour of assembly/manufacturing/test-lab for electric refrigeration units
1:30PM – 2:30 PM	Q&A / Interaction	Manager/CEO/CTO	Discussion about design, controls, logistics, business model
12:30 – 01:00 PM	Feedback & Departure	Faculty	Discussion about design, controls, logistics, business model

4. Key Observations / Learning

- The company has developed a specialized electric refrigeration system that can be fitted to small commercial vehicles and EVs, addressing the gap in intra-city cold logistics.
- Significant attention is paid to battery management, adaptive control technology, modular design and independent refrigeration unit separate from the vehicle's engine• The startup setup provides insight into how product-development, prototyping, testing, and scaling operations are handled in a real engineering environment — including multi-disciplinary collaboration (mechanical, electrical, electronics, thermal, logistics).
- The sustainability angle: replacing fuel-based refrigeration in transport with electric, reducing operational costs and environmental impact.
- Exposure to the challenges of cold-chain logistics in India: perishables, small-commercial-vehicle scale, last-mile delivery, cost pressures, reliability.
- Understanding of how start-ups operate: funds, incubators, grants (for example Yotuh raised ₹1.53 crore funding in 2024)

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5. Student Feedback

- Students found the visit extremely helpful in visualising how classroom theories (battery systems, refrigeration cycles, control electronics) are applied in industry.
- The interaction session clarified career pathways in clean tech, electric mobility, logistics engineering and innovation-driven manufacturing.

6. Photographs



Industrial visit at Yotuh energy Pvt Ltd..



Interaction during Industrial visit at Yotuh energy Pvt Ltd.



Q & A session during Industrial visit at Yotuh energy Pvt Ltd.

7. Conclusion

The industrial visit to Yotuh Energy Private Limited was highly beneficial and timely for students. It provided a real-world perspective on engineering design, manufacturing, and the business of clean-technology for logistics. Key takeaways include:

- How electric refrigeration systems are being engineered for cold chain applications.
- The role of interdisciplinary engineering (mechanical, electrical, electronics, thermal, controls) in product development.
- The importance of sustainability, cost-efficiency and market innovation in today's industry.
- Insights into the work culture and environment of a clean-tech start-up — agile, cross-functional, innovation-oriented.

Overall, this visit has enhanced students' understanding of the industry, broadened their perspectives on career opportunities, and strengthened the link between academic learning and industrial practice.

Faculty In-charge Name & Signature: _____

Prof. P.B. Chaudhari

Industry Visit Incharge Name & Signature: _____

Prof. P.B. Chaudhari

HOD Signature: _____

Dr. R.H. Shinde.