



B.M.S. College of Engineering, Bengaluru-19

(Autonomous Institute, Affiliated to VTU)

Department of Medical Electronics Engineering

Industrial Visit Report



Date of Visit: 13th November 2024

Organization visited: BPL Medical Technologies, Jigani Bengaluru

Participants: 5th Semester students

Objectives of the Visit

1. To understand the manufacturing processes of medical equipment.
2. To learn about quality control and safety measures in the healthcare industry.
3. To gain exposure to the technological advancements in medical devices.
4. To explore career opportunities in the healthcare and medical technology domain.

Established in 1963, by T.P.G. Nambiar, BPL (British Physical Laboratories) is an Indian electronics company headquartered in Bangalore, Karnataka, and has been a pioneer in India's electronics industry. Initially focusing on manufacturing electrocardiograph machines and panel meters, BPL expanded into, offering a range of consumer electronics and home appliances offering products like televisions, refrigerators, and washing machines. The visit aimed to understand BPL's manufacturing operations and their contributions to the "Make in India" initiative.

Jigani Manufacturing Facility

Located in Jigani, Bangalore, the BPL factory spanning approximately two acres in the industrial area, is equipped with state-of-the-art production technologies, enabling BPL to scale up manufacturing capabilities and meet both domestic and international healthcare demands. The facility includes assembly lines, quality control labs, and storage units, all designed to optimize production efficiency.

Key Insights

Manufacturing Process

The factory employs advanced automated systems for assembling products such as

- **X-ray Machines:** Advanced imaging equipment for diagnostic purposes.
- **Surgical C-arm Machines:** Mobile imaging devices used during surgical procedures.
- **Patient Monitors:** Devices that continuously track vital signs such as heart rate, blood pressure, and oxygen saturation.
- **ECG Machines:** Equipment for recording the electrical activity of the heart.
- **Anesthesia Workstations:** Comprehensive systems designed to deliver anesthesia and monitor patients during surgical procedures.

Quality Assurance

BPL adheres to stringent quality standards, implementing rigorous testing protocols at various production stages. The company holds ISO 13485, a global standard that establishes a Quality Management System (QMS) for the medical device industry, reflecting its commitment to quality management systems.

Sustainability Practices

The manufacturing plant incorporates eco-friendly practices, including energy-efficient machinery and waste reduction initiatives, aligning with global sustainability standards.

Interaction with Experts

Discussions with factory managers and engineers provided insights into the challenges of maintaining product quality while meeting market demands. The team emphasized continuous innovation and adherence to international standards as key factors in BPL's success.

Learning Outcomes

The visit offered a comprehensive understanding of large-scale manufacturing operations, quality control mechanisms, and the integration of technology in production processes. It highlighted the importance of innovation and quality assurance in sustaining a competitive edge in the medical equipment manufacturing industry.

Conclusion

The BPL factory visit was an enlightening experience, showcasing the company's dedication to quality, innovation, and sustainability. Such industry visits bridge the gap between theoretical knowledge and practical application, providing valuable insights into real-world manufacturing environments.




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Industry Visit – BPL healthcare Manufacturing Unit 13 Nov 2024

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