

## Industrial Visit- LeeP eDrive Pvt Ltd, Hosur

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A one-day Industrial Visit to LeeP eDrive Pvt Ltd, Hosur, was organized by the Department of Electrical and Electronics Engineering, on 08<sup>th</sup> September 2023, for the 4<sup>th</sup> and 7<sup>th</sup> semester students. 32 students from 4<sup>th</sup> sem and 20 students from 7<sup>th</sup> sem visited the organization, accompanied by faculty members Dr. Harish Kumar P and Mrs. Bini Babu.



Students of 7<sup>th</sup> and 4<sup>th</sup> semester during the industrial visit to LeeP eDrive Pvt Ltd ,Hosur.

This company is a startup registered with the Startup India framework. They specialize in designing and manufacturing networked batteries for use in EV powertrains. These networked Li-ion batteries are available in both NMC (Nickel Manganese Cobalt) and LFP (Lithium Iron Phosphate) variants. They cater to the 2W (two-wheelers), 3W (three-wheelers), and 4W (four-wheelers) electric vehicle market, offering energy storage capacities ranging from 2 kWh to 20 kWh and voltages between 48V and 96V.

Additionally, the company provides drive kits for 3W and 4W EVs through an international supply chain.

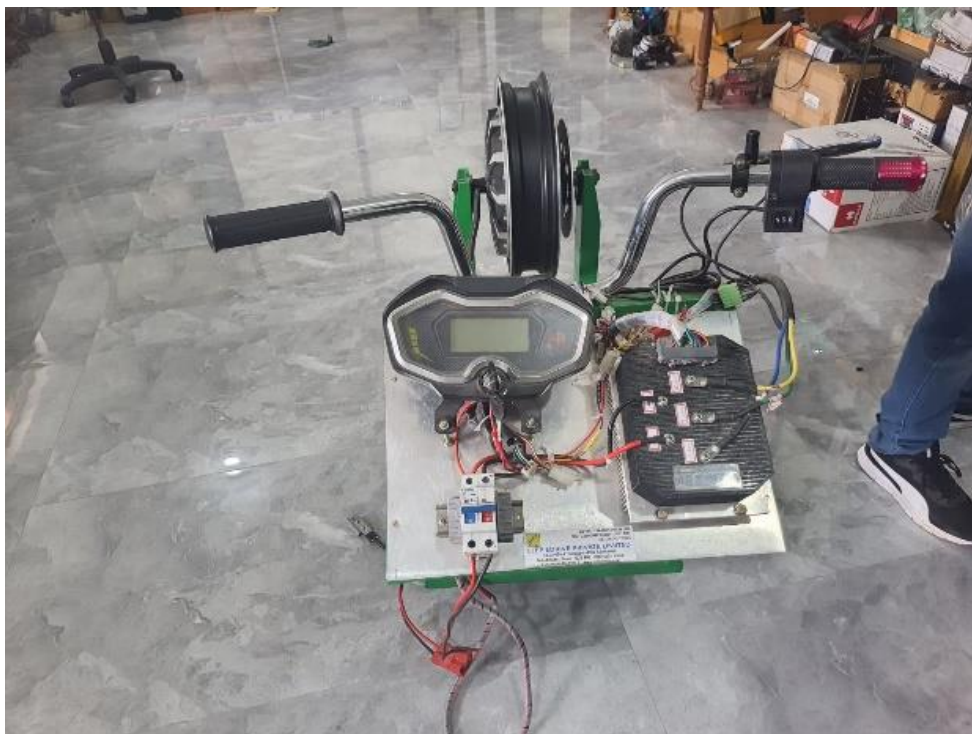
Mr. Ramanujan K S, the CEO and Managing Director of the company, shared valuable insights with the students. He discussed the different types of batteries commonly used in electric vehicles, such as Lithium-ion and Lead-acid batteries, elaborating on their specifications. He also delved into the importance of Battery Management Systems (BMS) in electric vehicles. Furthermore, he highlighted the electric motors used in EVs, including Induction motors and Permanent Magnet Synchronous Motors (PMSM). Mr. Ramanujan K S also provided an overview of the microcontroller technology employed for monitoring temperature and voltage levels in these batteries. He explained how this technology plays a crucial role in maintaining optimal battery performance and controlling temperature through methods like air cooling or water cooling. A prototype model of an electric bike consists of BLDC motors and Li-Ion batteries connected in series. This prototype showcases speed control for two-wheelers and demonstrates the functionality of regenerative braking in electric vehicles (EVs).



Mr. Ramanujan K S showing the parts of Battery-Operated Electric Auto.



Mr. Ramanujan K S explaining the different types of batteries used in EVs.



A prototype model of an Electric Bike.

## OUTCOME OF THE EVENT:

- Students acquired knowledge about the various types of batteries used in electric vehicles (EVs) and learned about charging methods for two-wheelers, three-wheelers, and four-wheelers.
- Students grasped the concepts related to improving the efficiency and range of EVs.
- The visit aided students in achieving program outcomes and provided valuable insights for their main projects.