KINGS
COLLEGE OF ENGINEERING
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DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)
INTERNAL STAFF SEMINAR REPORT

Date& time	: 14.05.2024 &12.30 P.M.
Venue	: Department Smart Classroom
Topic	: Seminar on "**Electric vehicles**"
Resource person	: **Mr. R.Rajadurai** Assistant professor, Mechanical Engineering, Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "**Electric vehicles**" for faculty members of the Mechanical Department on 14.05.2024 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on recent technologies evolving in electric vehicles.

The Following Points were Discussed During the Session:

Mechanical engineering has always been at the forefront of technological innovation, driving progress in various automobile industries. With the rapid pace of technological advancement, new developments in mechanical engineering are continually emerging. This report aims to highlight some of the upcoming technologies in the field of automobile engineering.

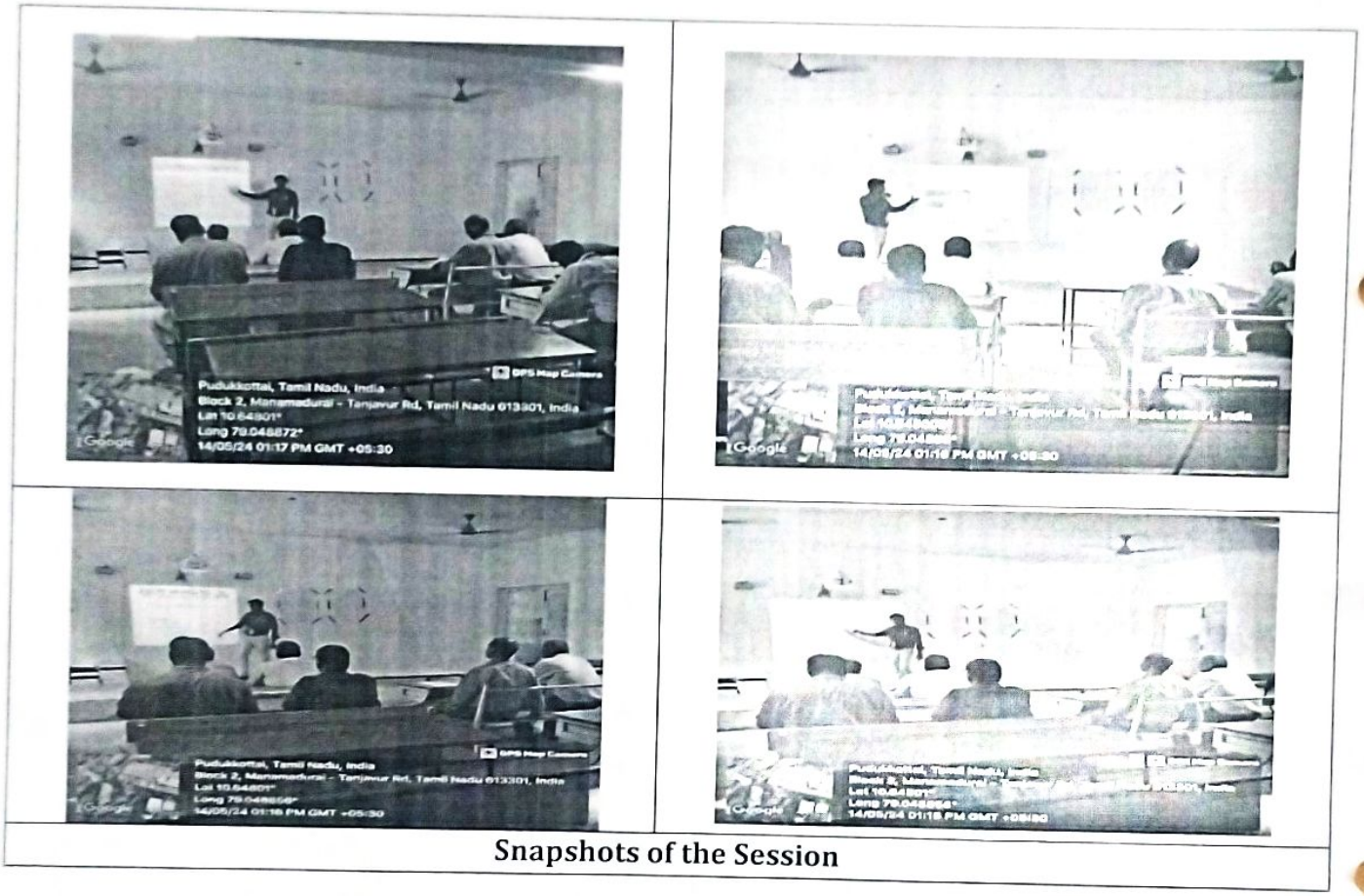
Market Growth: The EV market has been consistently growing globally. Various governments are offering incentives to both manufacturers and consumers to drive adoption. Additionally, advancements in battery technology are making EVs more affordable and practical for everyday use.

Environmental Impact: EVs have a significantly lower carbon footprint compared to traditional internal combustion engine vehicles. As the electricity grid becomes greener with more renewable energy sources, the environmental benefits of EVs continue to improve.

Technological Advancements: The technology behind EVs is rapidly advancing. This includes improvements in battery efficiency, charging infrastructure, and autonomous driving features. These advancements not only make EVs more attractive to consumers but also contribute to a more sustainable transportation ecosystem.

Challenges: Despite the progress, challenges remain. Infrastructure, particularly charging stations, needs to expand to accommodate the growing number of EVs on the road. Battery technology still faces limitations in terms of energy density, charging speed, and longevity, although research and development efforts are actively addressing these issues.

Overall, discussions about electric vehicles encompass a wide range of topics, reflecting their significance in the transition to a more sustainable transportation system.



Snapshots of the Session

Outcomes:

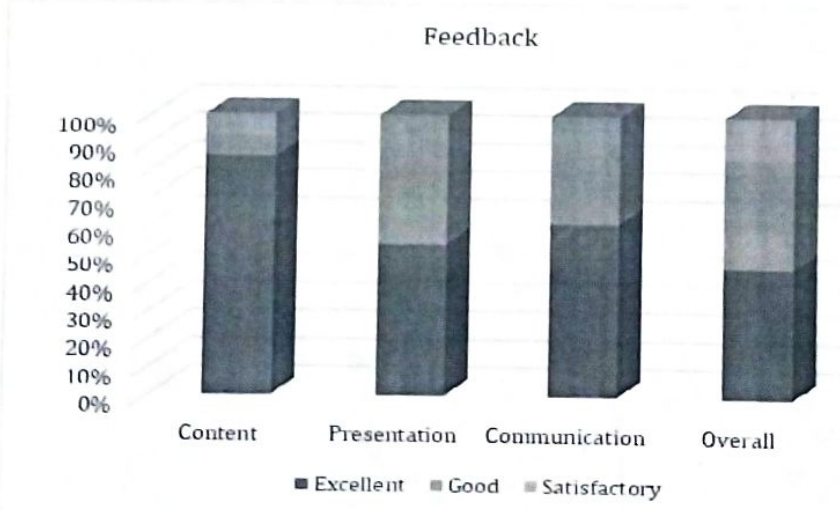
Upon listing of this seminar the participants can able to

- Understand the case studies and real-world applications of E-vehicles for different industries.
- Understand the basic difference between E-vehicles and hybrid vehicles.
- Know how the automation integration in automobile sectors that transforms traditional manufacturing paradigms into leading productivity, efficiency and safety, while also fostering innovation and skill development within the workforce.

References:

1. Hwang, Foo Shen, et al. "Review of battery thermal management systems in electric vehicles." Renewable and Sustainable Energy Reviews 192 (2024): 114171.
2. Nawaz, Muhammad Usman, Muhammad Salik Qureshi, and Shayan Umar. "Integration of Solar Energy Systems with Electric Vehicle Charging Infrastructure: Challenges and opportunity." Revista Espanola de Documentacion Cientifica 18.02 (2024): 1-18.
3. Saputra, Muhammad Candra, and Erna Andajani. "Analysis of Factors Influencing Intention to Adopt Battery Electric Vehicle in Indonesia." ADI Journal on Recent Innovation 5.2 (2024): 100-109.
4. Ullah, Irfan, et al. "Electric vehicles charging infrastructure planning: a review." International Journal of Green Energy 21.7 (2024): 1710-1728.
5. Kosuru, Venkata Satya Rahul, and Ashwin Kavasseri Venkitaraman. "Trends and challenges in electric vehicle motor drivelines-A review." International journal of electrical and computer engineering systems 14.4 (2023): 485-495.

Feedback Analysis:



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