SAKTHI POLYTECHNIC COLLEGE, Sakthinagar
DEPARTMENT OF MECHANICAL ENGINEERING

DETAILS OF FORUM MEETING

S.No.	DATE	INDUSTRIAL EXPERT / SPEAKER	NAME OF THE TOPIC	YEAR/ SEM	SEC
1.	25.09.2023	Mr. S.M.Naveenkumar TANSAM, TIDEL PARK, Chennai	Thermal Management Systems in E-Vehicle	II/III & III/V	A,B
2.	10.02.2024	Mr. R.DevaKrishnan Senior Detailer, ARTERAS Engineering Pvt,Ltd.	Introduction to Steel Structures	II/III & III/V	A,B

SAKTHI POLYTECHNIC COLLEGE

SAKTHI NAGAR-638 315

Academic Year: 2023-2024

DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering at Sakthi Polytechnic College was organized Guest Lecture on "Thermal Management systems in E-Vehicle". Special guest Mr. S.M.Naveenkumar TANSAM, TIDEL PARK, Chennai, was delivered lecture at Meeting hall on 25.09.2023.

Summary:

Thermal management systems in electric vehicles (EVs) are crucial for maintaining optimal performance, safety, and longevity of the vehicle's components. These systems address the heat generated by various parts of the EV, including the battery pack, electric motor, power electronics, and charging systems.

1. Battery Thermal Management:

The battery pack in an EV generates heat during charging and discharging. Managing the temperature of the battery is vital to ensure safety, maintain performance, and extend the battery's lifespan.

2. Electric Motor and Power Electronics Cooling:

Electric motors and power electronics (such as inverters) generate heat during operation. Proper cooling is necessary to prevent overheating, which can lead to performance issues or component failure.

4. Charging System Cooling:

Fast charging generates significant heat, which can affect the performance and safety of the charging system.

5. Thermal Management Integration:

System Coordination: Modern EVs integrate thermal management systems across various components to optimize overall efficiency. This can involve smart control systems that balance cooling and heating needs based on real-time data from temperature sensors.

In summary, effective thermal management is essential for the optimal operation of electric vehicles, influencing performance, safety, and longevity. The integration of various cooling and heating methods, along with advanced control systems, ensures that EVs can operate efficiently across a wide range of conditions.

SAKTHI POLYTECHNIC COLLEGE

Sakthi Nagar

FORUM MEETING

Organised by

Department of Mechanical Engineering

TOPIC : THERMAL MANAGEMENT SYSTEMS IN E-VEHICLE

Lets Talk about the Future

Speaker

Naveenkumar S M

TANSAM,TIDEL PARK,Chennai

Date : 25.09.23

Time : 10 A.M

Venue : Meeting Hall

Presidential Address

Dr.N.Thangavelu

Principal,Sakthi Polytechnic College

Forum Coordinators

R.Srinivasan

J.Sasikumar

All are cordially invited

Staff and Students of Mechanical Engineering

FORUM MEETING

Date ; 25.09.23

SAKTHI POLYTECHNIC COLLEGE

SAKTHI NAGAR-638 315

Academic Year: 2023-2024

DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering at Sakthi Polytechnic College was organized Guest Lecture on "Introduction to Steel Structures". Special guest Mr.R.DevaKrishnan, Senior Detailer, ARTERAS Engineering Pvt, Ltd was delivered lecture at Meeting hall on 10.02.2024.

Summary:

Introduction to Steel Structures

Steel structures are a fundamental component of modern architecture and engineering. They are used in a wide variety of applications, from skyscrapers and bridges to industrial buildings and residential homes. Here's an overview of steel structures, including their types, benefits, design principles, and applications:

1. Basics of Steel Structures

Steel as a Construction Material:

Properties: Steel is favored for its high strength-to-weight ratio, durability, and flexibility. It has good tensile and compressive strength, which allows it to support significant loads.

Types of Steel: Common types used in construction include Carbon Steel, Alloy Steel, and Stainless Steel. Each type has specific properties suited to different applications.

Components of Steel Structures:

Beams: Horizontal members that carry loads from the structure above.

Columns: Vertical members that support beams and transfer loads to the foundation.

Bracing: Diagonal members that provide stability and prevent buckling.

Connections: Welded or bolted joints that join different steel components together.

2. Types of Steel Structures

- Frame Structures
- Truss Structures
- Shell Structures
- Tensile Structures

3. Benefits of Steel Structures

- Strength and Durability

- Flexibility and Adaptability
- Sustainability
- Cost-Effectiveness

4. Design Principles

- Load-Bearing Capacity
- Structural Integrity
- Connection Design
- Fabrication and Erection
- Corrosion Protection

5. Applications

- Buildings
- Bridges
- Infrastructure
- Residential Structures

6. Challenges and Considerations

- Cost Variability
- Thermal Conductivity
- Fire Resistance

Conclusion

Steel structures are integral to modern construction, providing strength, flexibility, and efficiency. Understanding their design, benefits, and applications is essential for engineers and architects involved in creating durable and innovative structures.

SAKTHI POLYTECHNIC COLLEGE

Sakthi Nagar - 638315

(Govt Aided & NBA Accredited Institution)

FORUM MEETING

Organised by

DEPARTMENT OF MECHANICAL ENGINEERING

Speaker

Mr.R.Deva Krishnan
SPC Alumini Batch 2013-2016
Senior Detailer ,
ARTERAS Engineering Pvt. Ltd.,

TOPIC :

" INTRODUCTION TO STEEL STRUCTURES "

Date : 10.02.2024 | **Time : 10 am** | **Venue : Meeting Hall**

Presendential Address :
Dr.N.Thangavelu
Principal,Sakthi Polytechnic College

Forum Coordinators
Mr.R.Srinivasan
Mr.J.Sasikumar

All are cordially invited

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Forum Meeting