

EVENT REPORT

Name of the Activity:	Online industrial interaction on “Components Installation and Piping in Rolling Stock(3D-Design and 2D-Drawings)”	
Resource Person:	Er Sumit Tiwari (Design Engineer, Construcciones y Auxiliar de Ferrocarriles), Alumni, ME Department	
Date: 24 November, 2024	No. of Participants: 50+	

The Mechanical Engineering Department of Maharaja Agrasen Institute of Technology (MAIT) organized a highly engaging online industrial interaction on November 24, 2024. The session, titled “*Components Installation and Piping in Rolling Stock (3D-Design and 2D-Drawings)*,” was led by Er. Sumit Tiwari, an accomplished alumnus of the department and a Design Engineer at CAF. The event aimed to familiarize students and faculty with the practical applications of Computer-Aided Design and Drafting (CADD) in the rolling stock industry, with a special emphasis on metro systems.

Key Highlights

Er. Sumit Tiwari initiated the session by introducing the basics of rolling stock, with a specific focus on metro systems. He emphasized the criticality of meticulous design and installation of components and piping systems to enhance operational safety, efficiency, and durability. His detailed explanation of metro parts provided the attendees with a granular understanding of the intricacies involved in rolling stock design.

1. Detailed Insights on Metro Components:

Er. Tiwari delved into the anatomy of metro systems, elaborating on key components such as the propulsion system, braking mechanisms, HVAC systems, piping layouts, and bogies. He discussed how each element is designed to integrate seamlessly into the overall structure to meet rigorous safety and performance standards.

2. 3D-Design Techniques:

The session covered how three-dimensional modeling is used to visualize and simulate the installation of metro components and piping systems. Er. Tiwari highlighted how 3D models enable engineers to identify potential issues in the design phase, thus minimizing errors during production.

3. 2D-Drawings and Documentation:

Moving from 3D models, Er. Tiwari explained the creation of precise 2D drawings essential for manufacturing and assembly. He shared how these technical drawings serve as a blueprint for constructing metro parts and systems.

4. CADD Applications in Rolling Stock:

The session showcased real-world applications of CADD software, such as AutoCAD, CATIA, and SolidWorks, in designing, analyzing, and optimizing metro components. Case studies were presented to illustrate challenges like weight reduction, space optimization, and thermal efficiency in metro systems.

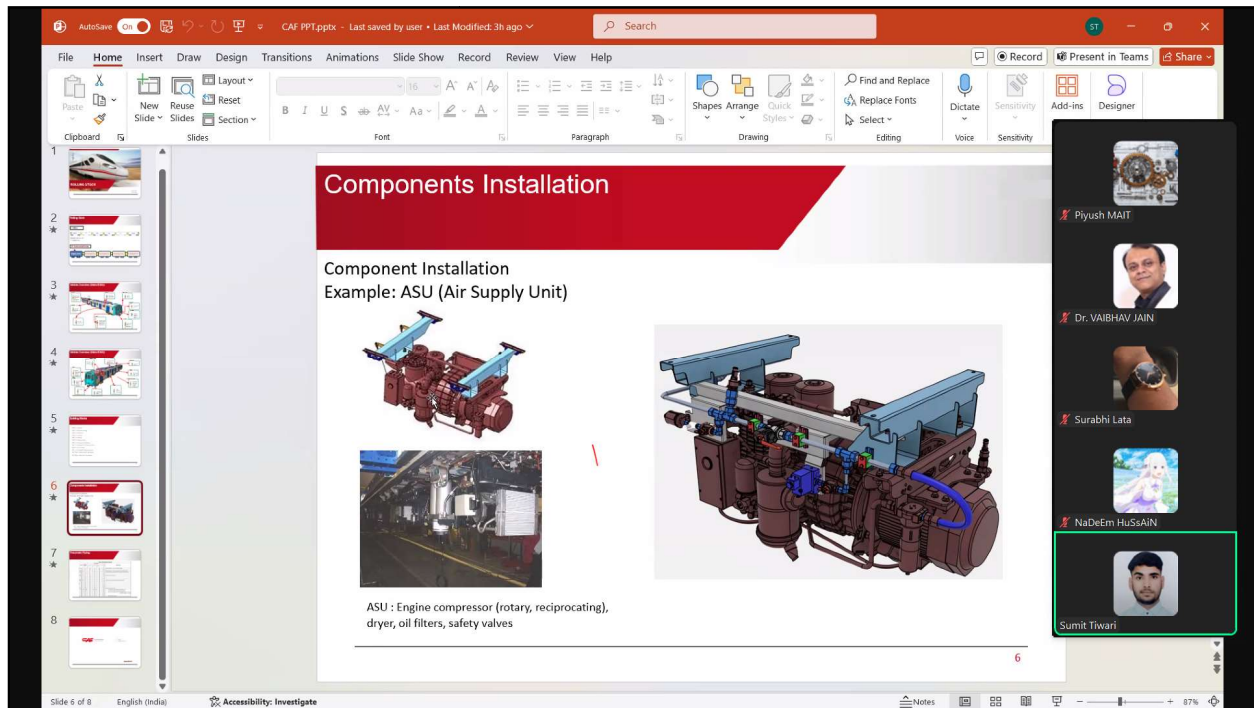
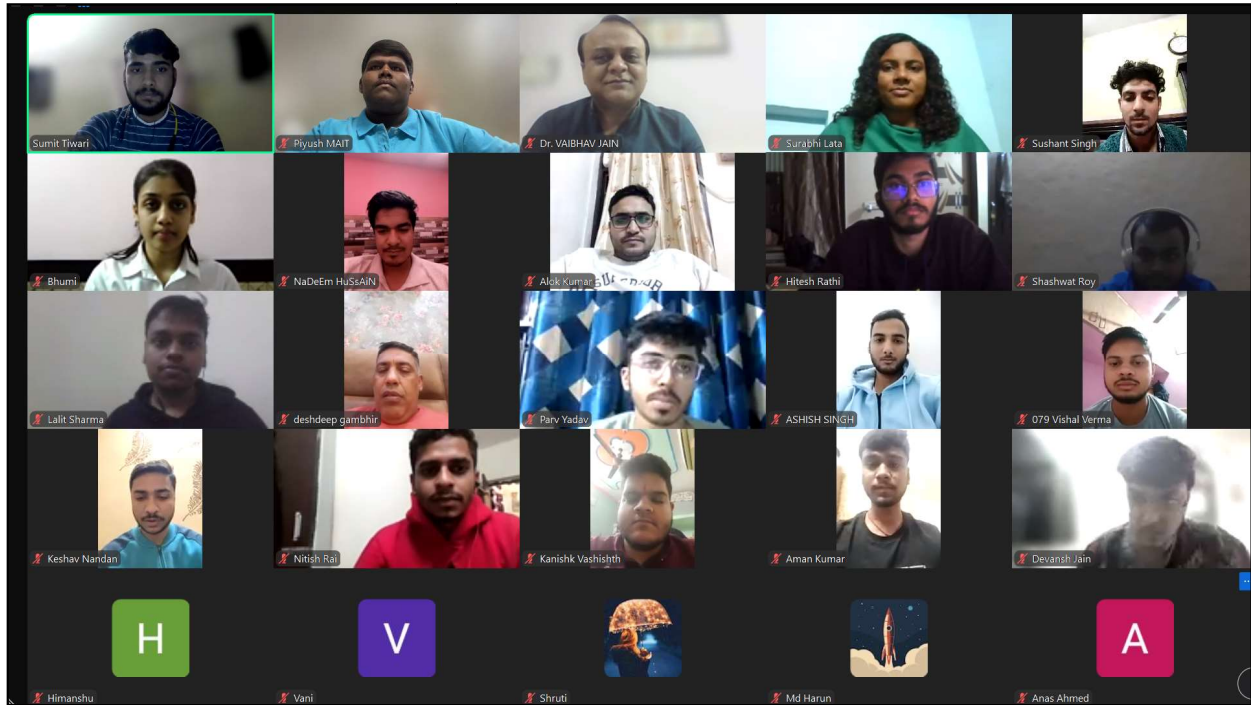
Interactive Q&A Session

The interaction concluded with an engaging Q&A session where participants asked questions about metro system design, software tools, and career pathways in the transportation engineering sector. Er. Tiwari also provided valuable advice to students on developing technical skills and keeping pace with industry trends.

Session Overview

Held via Zoom at 6:00 PM, the session saw an enthusiastic turnout of over 50 participants, including students, faculty, and alumni. Under the guidance of Dr. Vaibhav Jain, Head of the Mechanical Engineering

Department, the event underscored MAIT's commitment to bridging academic learning with industrial practices.



Attendance

Name (original name)	Email	Join time	Leave time	Duration (minutes)	Guest	Recording disclaimer response	In waiting room
Surabhi Lata		#####	#####	83	Yes	No Response	No

					Response	
Anas Ahmed	#####	#####	2	Yes	No	No
deshdeep gambhir	#####	#####	79	Yes	OK	No
Devansh Jain	#####	#####	78	Yes	OK	No
Tanmay Mathur	#####	#####	13	Yes	No	No
Bhumi	#####	#####	76	Yes	Response	No
Shashwat Roy	#####	#####	75	Yes	OK	No
Himanshu	#####	#####	1	Yes	No	No
Dr Alok Kumar	#####	#####	1	Yes	Response	No
Parv Yadav	#####	#####	74	Yes	OK	No
Ashish Raj	#####	#####	11	Yes	No	No
Himanshu	#####	#####	1	Yes	Response	No
Dr Alok Kumar	#####	#####	4	Yes	No	No
Sumit Tiwari	#####	#####	15	Yes	Response	No
Himanshu	#####	#####	71	Yes	OK	No
Mayank Agarwal	#####	#####	70	Yes	OK	No
Vani	#####	#####	71	Yes	OK	No
Shruti	#####	#####	71	Yes	OK	No
Pratham	#####	#####	1	Yes	No	No
Aryan Gupta	#####	#####	12	Yes	Response	No
Md Harun	#####	#####	71	Yes	OK	No
NaDeEm HuSsAiN	#####	#####	70	Yes	OK	No
Keshav Nandan	#####	#####	3	Yes	No	No
Pratham	#####	#####	1	Yes	Response	No
Anas Ahmed	#####	#####	69	Yes	OK	No
Dr. VAIBHAV JAIN	#####	#####	5	Yes	No	No
Pratham	#####	#####	52	Yes	Response	No
Alok Kumar (Dr Alok Kumar)	#####	#####	68	Yes	OK	No
MAIT	#####	#####			No	
Delhi social@mait.ac.in	#####	#####	1	No	Response	No
Lalit Sharma	#####	#####	68	Yes	OK	No
Manvi Gupta (RAM KISHAN GUPTA)	#####	#####	68	Yes	OK	No
ashish kumar kashyap	#####	#####	67	Yes	OK	No
Piyush MAIT (Raj)	#####	#####	67	Yes	OK	No
Ashish (Ashish 35)	#####	#####	6	Yes	OK	No
Nitish Rai	#####	#####	67	Yes	OK	No
Keshav Nandan	#####	#####	66	Yes	OK	No
Lakshya Aswal	#####	#####	62	Yes	OK	No
Tanmay Mathur	#####	#####	21	Yes	OK	No
B Jayant	#####	#####	65	Yes	OK	No
Dr. VAIBHAV JAIN	#####	#####	65	Yes	OK	No
Hitesh Rathi	#####	#####	3	Yes	No	No

Aman Khan	#####	#####	9	Yes	OK	No
Mayank Jately	#####	#####	64	Yes	OK	No
Vikas Sharma	#####	#####	26	Yes	OK	No
madhukar chhimwal	#####	#####	33	Yes	OK	No
Harsh Raj Singh	#####	#####	27	Yes	OK	No
Hitesh Rathi	#####	#####	62	Yes	OK	No
Anil Dahiya	#####	#####	29	Yes	OK	No
Anmol Kumar Bhagat					No	
I8OII4IOO4	#####	#####	1	Yes	Response	No
Ashish Raj	#####	#####	15	Yes	OK	No
Tushar Tushar	#####	#####	6	Yes	OK	No
sumit joshi	#####	#####	51	Yes	OK	No
Sumit Tiwari	#####	#####	54	Yes	OK	No
079 Vishal Verma	#####	#####	3	Yes	OK	No
Lalit Sharma	#####	#####	18	Yes	Response	No
Aman Kumar	#####	#####	53	Yes	OK	No
Anubhav Tagore	#####	#####	25	Yes	OK	No
Rakesh Saini	#####	#####	50	Yes	OK	No
Anirudh Nair	#####	#####	1	Yes	Response	No
Surabhi Lata	#####	#####	1	Yes	OK	No
Anirudh Nair	#####	#####	51	Yes	Response	No
Kanishk Vashishth	#####	#####	2	Yes	OK	No
079 Vishal Verma	#####	#####	31	Yes	Response	No
Kanishk Vashishth	#####	#####	50	Yes	Response	No
Sumit Pandey	#####	#####	49	Yes	OK	No
ASHISH SINGH	#####	#####	48	Yes	OK	No
Syed Ober Ali	#####	#####	6	Yes	OK	No
Amaan K	#####	#####	45	Yes	OK	No
Tanmay Mathur	#####	#####	21	Yes	Response	No
Divyanshu (Deva)	#####	#####	19	Yes	Response	No
sundaram kashyap	#####	#####	44	Yes	OK	No
Narinder Kaushik	#####	#####	42	Yes	OK	No
Ashish Raj	#####	#####	39	Yes	OK	No
Sushant Singh	#####	#####	39	Yes	Response	No
SACHIN GUPTA	#####	#####	38	Yes	OK	No
Lalit Sharma	#####	#####	36	Yes	Response	No
Harsh Raj Singh	#####	#####	24	Yes	Response	No
Arjun A .M	#####	#####	10	Yes	OK	No
Pankaj Kumar Pandey	#####	#####	3	Yes	OK	No
madhukar chhimwal	#####	#####	7	Yes	Response	No
Arjun A .M	#####	#####	25	Yes	OK	No
Tanmay Mathur	#####	#####	11	Yes	OK	No
079 Vishal Verma	#####	#####	20	Yes	OK	No
Karan Kumar	#####	#####	1	Yes	No	No

madhukar chhimwal

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4 Yes

Response
No
Response No