सत्यमेव जयते

राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर

NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

(An Institute of National Importance)

Under Ministry of Education, Govt. of India

G.E Road, Raipur – 492010 (C.G.)

INDUSTRY EXPERT LECTURE (Lecture-I of the series, Autumn Semester, 2025) under Industry-Institute Collaboration Cell (IICC), Department of Metallurgical and Materials Engineering, NIT Raipur

Event Name	**Industry Expert lecture *under* Industry -Institute Collaboration Cell (IICC), NIT Raipur**
Organizing Department	Metallurgical and Materials Engineering, NIT Raipur
Name of Resource person	**Dr. *Chiradeep Ghosh***, Principal Scientist, R&D Division
Designation	**Principal Scientist**, Product Development Research Group, R & D division, Tata Steel Limited, Burma Mines, Jamshedpur, India
Date/Day	**19/08/2025; Tuesday**
Time	4:30 PM --- 6:30 PM
Venue	Computer Lab, MME, NIT Raipur
Total Participants (Students and faculties)	**~ 123 [101 (online mode) + 22 (offline mode)]**
Program Coordinator	**Dr. Sudip Kumar Sinha**

Title of Lecture:

"Evolution of advanced high strength steels for automotive applications"

Event Summary

The purpose of this Industry-Expert Lecture is to prepare MME (and related departments) undergraduate students with various scope and opportunities in the field of materials relatedindustry.In order for the students to gain a better understanding of the structure-property correlation in automotive steel, advanced non-ferrous materials, and recent advancements in modern electric vehicle components and their challenges, Dr. Chiradeep Ghosh, Principal Scientist, R & D division, TATA Steel, Jamshedpur, shared his knowledge

and extensive experience with them virtually. It was agreed that applied research through multidisciplinary collaboration among science and engineeringfaculties in various Indian and foreign universities offers unique strength for the overall growth development in research. Strength to weight ratio is of major concern for materials usage in automotive applications. A new ultra-high strength, high fracture toughness low alloy steel designated as Q&P (Quench and Partitioning)steel was discussed as a potential replacement for the traditional Dual phase steels.Furthermore, he has discussed job options in TATA Steel's R&D division for MME graduate students and the creation of start-up ventures for both UG students and PG (PhDs) scholars.

Event Photographs