



Department of Mechanical and Aerospace Engineering
Indian Institute of Technology Hyderabad
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MAE Industry Lecture 9 | ME6100 Industry Lecture



Title: Safeguarding Assets: Understanding and Mitigating Corrosion in Oil & Gas

Speaker: Dr. Sukanta Ghosh

Affiliation: General Manager of Materials & Corrosion in Shell, Shell Technology Center Bangalore, India

Abstract | This talk is intended to give a brief overview of materials & corrosion issues in the oil and gas industries. Corrosion issues in oil and gas are relatively less discussed and researched in universities across the globe as compared to other industries. The talk will touch upon the very basics of metal corrosion. Then, it will give an overview of the corrosion cost across various industries and how it affects our economy. In the subsequent sections, the talk will cover the following:

- Main corrosion threats to our plant
- Where are the threats to our plant
- How significant are these threats
- How do we control corrosion
- Basics of materials selection philosophy
- Managing the risks
- Role of a Materials & Corrosion engineer

In the end, we will briefly touch upon a few of the upcoming corrosion issues relative to energy transition – especially in the areas of Carbon Capture and Storage, Hydrogen, and Biofuel.

About the Speaker| Dr. Sukanta Ghosh is currently working as General Manager of Materials & Corrosion in Shell and is based out of Shell Technology Center Bangalore, India. He is leading a team of about 30 Materials & Corrosion engineers spread across Bangalore, Amsterdam, and Houston. His team also operates two extensive Materials & Corrosion research laboratories and testing facilities in Shell Technology Center Bangalore and Houston, respectively. By educational background, Dr. Ghosh is a metallurgist and has a PhD in Corrosion. He has more than 18 years of experience in the oil and gas industry and worked at various places across the globe. His expertise includes metallurgy, electrochemistry, materials selection, corrosion control and modeling, asset integrity, etc. Dr. Ghosh also acts as a technical authority for Materials & Corrosion in Shell.

Date: 26/03/2025

Time: 1430 Hrs.