Government Engineering College, Gandhinagar

Metallurgy Engineering Department

Expert Lecture Report

Expert lecture on "Electron Microscopy" Jointly Organised by Metallurgy Engineering Department, Government Engineering College, Gandhinagar & Students Society of Metallurgy Engineering Gandhinagar (SSMEG) on **22-08-2025**, 2.00 pm – 3.30 pm (offline). Lecture was delivered for BE (Metallurgy Engineering) Students of semester 3rd, 5th and 7th by Dr. Mrunalkumar Chaudhari, Assistant Professor (Metallurgy), Mechanical Engineering Department, LD College of Engineering, Ahmedabad.

Electron microscopy is vital for metallurgists to analyze a metal's microstructure, understand its mechanical properties, perform failure analysis, and identify contaminants or defects at high magnifications, far beyond what optical microscopes can achieve. By revealing details like grain size, phase distribution, and fracture origins, electron microscopes enable metallurgists to correlate microstructural features with material performance, optimize manufacturing processes, and determine the causes of material failures. 24 Students and 05 faculties of Metallurgy department were benefited by the lecture.









