

MSE-313-Welding and Joining (2CH)

Pre-requisites: MSE-101 Fundamentals of Engineering Materials

Course Contents

Processes and materials from the viewpoint of their fundamental physical and chemical properties, Cold welding, adhesive bonding, diffusion bonding, soldering, brazing, flames, arcs, high-energy density heat sources, solidification, cracking resistance, shielding methods, and electric contacts, Science of non-equilibrium transformations during welding, Adhesion-Cohesion, Riveting, assembly, fastening, Bond strength in different types of techniques.

Suggested Books

- Harold E Pattee, *Technological Advances in Welding and Other Joining Process*, Batelle Press
- Howard Carry and Scott Helzer, *Modern Welding Technology*, 6th Edition