Rolling Technology Of Metals And Sheets

Training Program

Course Description:

This course fly by the participants through a sky of **Rolling Technology** as a technical process have many types , many industries , many materials , many branches , many aspects and many advantages , If you want to fly you can begin with us .

Who Should Attend?

This Course is Designed For :-

- Managers and engineers in industrial facilities.
- Supervisors and technicians in industrial factories and companies.

Course Objectives:

By the end of this course, participants should be able to:

- Define the forming technology
- Define the Forming processes types
- Distinguish between hot and cold Forming
- Know about the advantage and drawbacks of forming process in general
- Know about rolling principle
- Know about rolling advantages and disadvantages
- Rolling Machines

Course Outline:

Engineering Materials and Heat Treatment

- Engineering Materials
- General Material Property
- Iron-Carbon phase diagram
- Hardenability
- Ferrous and Non-Ferrous
- General about Heat treatment

Introduction about forming in general (Hot and Cold)

- Plastic Forming definition (Mechanical Working of Metals)
- Advantages of plastic forming processes than other types of forming

- Classification of metal working processes
- Characteristics of **Cold Working**
- Cold working drawbacks
- Materials for cold working
- Characteristics of **Hot Working**
- Hot working drawbacks
- **Worm Working** or Semi Hot Working
- Yield Strength

Rolling Technology

- Principle of rolling
- Semi-Finished Products (Blooms, Billets and Slaps)
- Finished Products (Plate, Sheets and Strips)
- Rolling Mills
- Typical arrangement of Rollers for rolling mils
- Cold Rolling in General (Sheet Metals)
- Hot Rolling in General (Metals)
- Rolling Machines
- Rolling Cylinders passages (Grooves)

Rolling Mechanics and Analyzing

- Rolling Parameters
- Forces Calculations
- Rolling Simulation Models
- Material Behaviors:

    - ✓ Grains sizes
    - ✓ Strain hardening

- Materials to be rolled

Theory of Hot and Cold Rolling.

- Hot rolling theory
- Cold Rolling theory
- Torques and Powers
- Examples

Rolling Defects