

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Mechanical Engineering - NOC:Laser Based Manufacturing

Subject Co-ordinator - Prof. Shrikrishna N. Joshi

Co-ordinating Institute - IIT - Guwahati

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

- Lecture 1 - Lasers in Manufacturing: Importance and Applications
- Lecture 2 - Fundamentals of Laser Technology
- Lecture 3 - Laser System: Construction and Types
- Lecture 4 - Principle of Operation, Types of Laser Cutting, and Kerf Geometry
- Lecture 5 - Types of Lasers in Material Removal, Process and Performance Parameters
- Lecture 6 - A Case-study on Cutting a Circular Part using CO2 Laser Machine
- Lecture 7 - Mechanisms of Laser Welding - Part I
- Lecture 8 - Mechanisms of Laser Welding - Part II
- Lecture 9 - Effects of Process Parameters during Laser Welding and Study of Defects in Weld Beads
- Lecture 10 - A Case Study on Welding of Mild Steel Sheets using 2.5 kW CO2 Laser Machine
- Lecture 11 - Material Forming and Fundamentals of Laser Forming
- Lecture 12 - Mechanisms of Laser Forming
- Lecture 13 - Process Parameters and their Effects on the Performance of Laser Forming
- Lecture 14 - Surface Treatment and Application of Lasers
- Lecture 15 - Laser Surface Hardening
- Lecture 16 - Laser Surface Alloying
- Lecture 17 - Laser Cladding
- Lecture 18 - Additive Manufacturing Techniques
- Lecture 19 - Laser Scanning Stereolithography
- Lecture 20 - Selective Laser Sintering and Selective Laser Melting
- Lecture 21 - Process and Performance Parameters of Laser Based Additive Manufacturing Techniques
- Lecture 22 - Lasers in Manufacturing Automation
- Lecture 23 - CNC for Laser Based Manufacturing
- Lecture 24 - CAD for Laser Based Manufacturing
- Lecture 25 - Laser-assisted Material Forming
- Lecture 26 - Effect of Coatings, 3D Laser Forming and Micro-forming

Get DIGIMAT For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

<http://www.digimat.in>