

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

NPTEL Video Course - Mechanical Engineering - NOC:Manufacturing Process Technology - Part II

Subject Co-ordinator - Dr. Shantanu Bhattacharya

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Introduction to Advanced Machining Processes
- Lecture 2 - Classification of Machining Processes
- Lecture 3 - Silicon growth and Crystallography
- Lecture 4 - Micro Fabrication Technology
- Lecture 5 - Photolithography
- Lecture 6 - Soft Lithography
- Lecture 7 - Introduction to Wet Etching Techniques
- Lecture 8 - Introduction to Dry Etching Techniques
- Lecture 9 - Introduction of Additive Techniques
- Lecture 10 - Introduction to Abrasive Jet Machining Process
- Lecture 11 - Ultrasonic Machining Process
- Lecture 12 - Determination of MRR of Ultrasonic Machining Process
- Lecture 13 - Mechanics of Ultrasonic Machining (USM)
- Lecture 14 - Effect of Process parameters of USM
- Lecture 15 - Ultrasonic Machining Unit
- Lecture 16 - Electrochemical Machining Processes (ECM)
- Lecture 17 - Material Removal Rate of ECM
- Lecture 18 - Electrode Double Layer
- Lecture 19 - Material removal rate of an alloy in ECM
- Lecture 20 - Kinematics and Dynamics of ECM
- Lecture 21 - Temperature and Pressure rise during ECM
- Lecture 22 - Determination of Electrolyte flow velocity in ECM
- Lecture 23 - Effect of heat and Hydrogen bubble generation during ECM Process
- Lecture 24 - Theoretical determination of Tool shape
- Lecture 25 - Design for Electrolyte flow in ECM
- Lecture 26 - Introductions of Electro-chemical Drilling Process
- Lecture 27 - Introduction to Finishing Process
- Lecture 28 - Electric Discharge Machining Process
- Lecture 29 - EDM part-2

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- Lecture 30 - Effect of various process parameters on EDM process
- Lecture 31 - Analysis of RC circuit for EDM
- Lecture 32 - Electrodischarge machining system
- Lecture 33 - Effect of various parameters on EDM Process
- Lecture 34 - Tool Electrodes and Dielectric fluids and Electron Beam Machining
- Lecture 35 - Mechanics of Electron Beam Machining Process
- Lecture 36 - Functional Characteristics of EBM Process Edit Lesson
- Lecture 37 - Introduction of Laser Beam Machining Process
- Lecture 38 - Material removal rate of LBM
- Lecture 39 - Heat conduction and Temperature rise during LBM
- Lecture 40 - Modelling of LBM processes
- Lecture 41 - Metal forming Processes Edit Lesson
- Lecture 42 - Yield Criterion used in Metal Forming Processes Edit Lesson
- Lecture 43 - Concept of Principal stress, strain
- Lecture 44 - Trescas' Yield criteria and Rolling Process
- Lecture 45 - Rolling Processes - Part 1
- Lecture 46 - Rolling Processes - Part 2
- Lecture 47 - Additive Manufacturing Processes
- Lecture 48 - Fused Deposition Modeling Process