

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

NPTEL Video Course - Mechanical Engineering - Technology of Surface Coating

Subject Co-ordinator - Prof. A.K. Chattopadhyay

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - CVD Reaction
- Lecture 3 - Adhesion of Surface Coating
- Lecture 4 - CVD System
- Lecture 5 - CDV of Tic
- Lecture 6 - Chemical Vapour Deposition of Nitride Coating
- Lecture 7 - Chemical Vapour Deposition of Carbo-Nitride Coating
- Lecture 8 - Chemical Vapour Deposition of Chromium
- Lecture 9 - Chemical Vapour Deposition of Aluminium Oxide
- Lecture 10 - Chemical Vapour Deposition of Diamond
- Lecture 11 - Vacuum Evaporation Deposition
- Lecture 12 - Reactive Evaporation Deposition
- Lecture 13 - Cathodic Arc Evaporation Deposition
- Lecture 14 - Sputtering
- Lecture 15 - Magnetron Sputtering
- Lecture 16 - Unbalanced Magnetron Sputtering
- Lecture 17 - Radio frequency and pulsed DC sputtering
- Lecture 18 - Sputter Deposition of Nitride Coating
- Lecture 19 - Sputter Deposition of Molybdenum Di Sulphide Coating
- Lecture 20 - Influence of Architecture of Sputter Deposited Molybdenum Di Sulphide Coating
- Lecture 21 - Electro Plating, Anodizing and Electro-Less Plating
- Lecture 22 - Coating of Monolayer Abrasive Grain by Electro Plating
- Lecture 23 - Mechanism of Wetting
- Lecture 24 - Coating on Ceramics by Wetting
- Lecture 25 - Coating of Monolayer Abrasive Grain by Wetting
- Lecture 26 - Coating on Abrasive Grain
- Lecture 27 - Combustion Spray Process
- Lecture 28 - Plasma Spray Process
- Lecture 29 - Mechanical, Chemical and Ion-Assisted Method

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- Lecture 30 - Combustion Spray Process
- Lecture 31 - Production of Low Vacuum
- Lecture 32 - Production of High Vacuum
- Lecture 33 - Measurement of Low Pressure and Gas Flow in Coating Deposition System
- Lecture 34 - Physical Characterization
- Lecture 35 - Assessment of Coating Hardness
- Lecture 36 - Assessment of Friction and Wear of Coating
- Lecture 37 - Assessment of Surface Roughness and Thickness of Coating
- Lecture 38 - Assessment of Adhesion of Coating
- Lecture 39 - Performance Evaluation of TiN Coated Tool
- Lecture 40 - Performance Evaluation of HFCVD Diamond Coated Tool