

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

NPTEL Video Course - Metallurgy and Material Science - NOC:Metallurgical and Electronic Waste Recycling

Subject Co-ordinator - Prof. Arunabh Meshram

Co-ordinating Institute - IIT - Kanpur

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

- Lecture 1 - Introduction to Materials Recycling
- Lecture 2 - Classification of Metallurgical and Electronic Wastes - Part 1
- Lecture 3 - Classification of Metallurgical and Electronic Wastes - Part 2
- Lecture 4 - Importance of Unit Operations - Part 1
- Lecture 5 - Importance of Unit Operations - Part 2
- Lecture 6 - Pretreatments in Recycling
- Lecture 7 - Pyrometallurgy
- Lecture 8 - Electrometallurgy
- Lecture 9 - Hydrometallurgy
- Lecture 10 - Refining
- Lecture 11 - Aluminium dross recycling
- Lecture 12 - Spent pot lining recycling
- Lecture 13 - Red mud recycling
- Lecture 14 - Aluminium scrap recycling
- Lecture 15 - Salt slag recycling
- Lecture 16 - Copper Smelter Slag recycling
- Lecture 17 - Copper Smelter Slag and Raffinate recycling
- Lecture 18 - Raffinate recycling (Continued...)
- Lecture 19 - Spent Electrolyte recycling
- Lecture 20 - Copper scrap recycling
- Lecture 21 - Zinc ash recycling
- Lecture 22 - Zinc ash and zinc dross recycling
- Lecture 23 - Zinc dross recycling (Continued...)
- Lecture 24 - Zinc dust recycling
- Lecture 25 - Zinc dust and zinc scrap recycling
- Lecture 26 - Ironmaking slag recycling
- Lecture 27 - Ironmaking and steelmaking slag recycling
- Lecture 28 - Steelmaking slag recycling (Continued...)
- Lecture 29 - Steel scrap recycling

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- Lecture 30 - Wastewater recycling
- Lecture 31 - Recycling of E-Waste
- Lecture 32 - Waste Printed Circuit Boards (WPCBs) recycling
- Lecture 33 - WPCBs recycling: Delamination
- Lecture 34 - WPCBs recycling: Pyrometallurgical processes
- Lecture 35 - WPCBs recycling: Hydrometallurgical processes
- Lecture 36 - Battery Recycling: Ni-based batteries
- Lecture 37 - Battery Recycling: Lead-acid batteries
- Lecture 38 - Battery Recycling: Zinc-based batteries
- Lecture 39 - Battery Recycling: Li-ion batteries
- Lecture 40 - Environmental Impacts of Recycling
- Lecture 41 - Conclusion