

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

NPTEL Video Course - Mechanical Engineering - NOC:Dynamic Behaviour of Materials

Subject Co-ordinator - Prof. Prasenjit Khanikar

Co-ordinating Institute - IIT - Guwahati

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

Lecture 1 - Introduction to Dynamic Behaviour of Materials - I
Lecture 2 - Introduction to Dynamic Behaviour of Materials - II
Lecture 3 - Introduction to Waves
Lecture 4 - Quasi-static vs Dynamic Deformation
Lecture 5 - Elastic Wave and its Classification
Lecture 6 - Propagation of Elastic Waves in Continuum
Lecture 7 - Wave Reflection, Refraction and Interaction
Lecture 8 - General Solution of Elastic Wave Equation
Lecture 9 - Additional Considerations of Elastic Wave in Cylindrical Bar
Lecture 10 - Introduction to Plastic Waves
Lecture 11 - Plastic Waves of Uniaxial Stress
Lecture 12 - Plastic Waves of Combined Stress
Lecture 13 - Taylor's Experiment for Plastic Wave Propagation - 1
Lecture 14 - Taylor's Experiment for Plastic Wave Propagation - 2
Lecture 15 - Taylor's Experiment
Lecture 16 - Introduction to Shock Waves - I
Lecture 17 - Introduction to Shock Waves - II
Lecture 18 - Shock Wave
Lecture 19 - Rankine Hugoniot Treatment and Shock Wave under Impact
Lecture 20 - Shock Wave under Impact
Lecture 21 - Equations of States (Shock Waves)
Lecture 22 - Equations of States (Shock Waves)
Lecture 23 - Complex Problems of Shock Waves and Temperature Rise under Shock Wave
Lecture 24 - Shock Wave Attenuation, Interaction and Reflection - I
Lecture 25 - Shock Wave Attenuation, Interaction and Reflection - II
Lecture 26 - Shock Wave Interaction and Reflection
Lecture 27 - Fundamentals of Materials Science and Engineering
Lecture 28 - Shock Wave Induced Phase Transformations - 1
Lecture 29 - Shock Wave Induced Phase Transformations - 2

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Lecture 33	- Experimental Techniques for Dynamic Deformation	- 2
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Lecture 40	- Plastic Deformation Under Shock Waves	- 2
Lecture 41	- Plastic Deformation Under Shock Waves	- 3
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