Mindluster Platform

About the course Orthotropic Materials in Engineering

Orthotropic Materials course, In this course we will learn about the properties, behavior, and applications of orthotropic materials in engineering and design.

Engineering Category's Courses

Course Lesson(33)

Lesson 1 : **Mechanics of Fiber Reinforced Polymer Composite Structures Intro Video**

Lesson 2 : **Lec 1 Composite Materials Introduction**

Lesson 3 : **Lec 2 Composite Materials Classification**

Lesson 4 : **Lec 3 Anisotropic Elasticity**

Lesson 5 : **Lec 4 Orthotropic Materials**

Lesson 6 : **Lec 5 Hooke s Law for 2D Lamina**

Lesson 7 : **Lec 6 Engineering Constants for 2D Lamina**

Lesson 8 : **Lec 7 Strength Failure Criteria Part I**

Lesson 9 : **Lec 8 Strength Failure Criteria Part II**

Lesson 10 : **Lec 9 Hygrothermal Behavior of Lamina**

Lesson 11 : **Lec 10 Introduction and Terminologies**

Lesson 12 : **Lec 11 Evaluation of Elastic Moduli**

Lesson 13 : **Lec 12 Evaluation of Longitudinal Strength**

Lesson 14 : **Lec 13 Evaluation of Transverse and Shear Strengths**

Lesson 15 : **Lec 14 Evaluation of Hygrothermal Properties**

Lesson 16 : **Lec 15 Elasticity Approach**

Lesson 17 : **Lec 16 Experimental Evaluation**

Lesson 18 : **Lec 17 Laminate Introduction**

Lesson 19 : **Lec 18 Classical Lamination Theory â€“ Part I**

Lesson 20 : **Lec 19 Classical Lamination Theory â€“ Part II**

Lesson 21 : **Lec 20 Response of Laminate â€“ Significance of ABBD**

Lesson 22 : **Lec 21 Special Classes of Laminates**

Lesson 23 : **Lec 22 Engineering Constants of Laminates**

Lesson 24 : **Lec 23 Hygrothermal Behaviour of Laminates**

Lesson 25 : **Lec 24 Analysis of Laminates**

Lesson 26 : **Lec 25 Failure of Laminates**

Lesson 27 : **Lec 26 Failure Analysis under Combined Loading**

Lesson 28 : **Lec 27 Design Example I**

Lesson 29 : **Lec 28 Design Example II**

Lesson 30 : **Lec 29 Interlaminar Stresses Delamination**

Lesson 31 : **Lec 30 Prediction of Delamination**

Lesson 32 : **Lec 31 Transverse Deflection**

Lesson 33 : **Lec 32 Buckling and Free Vibration**

Related courses

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