Mindluster Platform

About the course Elastic stress analysis

Elastic stress analysis course in hindi, in this course covers the study of stress distribution in elastic materials, essential for designing durable and safe structures.

Engineering Category's Courses

Course Lesson(42)

Lesson 1 : **Finite element modeling of welding processes Intro Video**

Lesson 2 : **Lec 1 Properties Modelling approaches Process modelling and Optimization**

Lesson 3 : **Lec 2 Fusion welding 1**

Lesson 4 : **Lec 3 Fusion welding 2**

Lesson 5 : **Lec 4 Soldering Brazing Solid state welding processes**

Lesson 6 : **Lec 5 Advanced welding processes**

Lesson 7 : **Lec 6 Advances in laser microwelding**

Lesson 8 : **Lec 7 Additive manufacturing processes**

Lesson 9 : **Lec 8 Elastic stress analysis I**

Lesson 10 : **Lec 9 Elastic stress analysis II and Potential energy method**

Lesson 11 : **Lec 10 Three Dimensional element**

Lesson 12 : **Lec 11 Weighted residual method**

Lesson 13 : **Lec 12 Material nonlineaity I**

Lesson 14 : **Lec 13 Material nonlineaity II**

Lesson 15 : **Lec 14 Fluid flow and Natural coordinate system I**

Lesson 16 : **Lec 15 Natural coordinate system in 3D and XFEM**

Lesson 17 : **Lec 16 Introduction to heat source model**

Lesson 18 : **Lec 17 Heat source models in welding I**

Lesson 19 : **Lec 18 Heat source models in welding II**

Lesson 20 : **Lec 19 Heat source model for Keyhole mode and solid state welding**

Lesson 21 : **Lec 20 Implementation of FEM in fusion welding processes**

Lesson 22 : **Lec 21 Implementation of FEM for fluid flow in fusion welding processes**

Lesson 23 : **Lec 22 FEM modeling of EBW and RSW**

Lesson 24 : **Lec 23 FEM modeling of FSW and hybrid FSW**

Lesson 25 : **Lec 24 Demonstration of thermal model development using commercial software**

Lesson 26 : **Lec 25 Fluid flow modeling in welding processes**

Lesson 27 : **Lec 26 Heat transfer and fluid flow analysis in quasi steady state**

Lesson 28 : **Lec 27 Prediction of free surface profile**

Lesson 29 : **Lec 28 Principle stress Hydrostatic and Deviatoric Components of Stress**

Lesson 30 : **Lec 29 Yield Function Von Mises Yield Surface and Hardening rule**

Lesson 31 : **Lec 30 Material models Residual stress and distortion**

Lesson 32 : **Lec 31 Phase transformation effect on Residual stress and distortion**

Lesson 33 :
Lec 32 Demonstration of thermo mechanical model development using commercial software

Lesson 34 : **Lec 33 Fundamentals of metal transfer in arc welding**

Lesson 35 : **Lec 34 FE based modelling approaches**

Lesson 36 : **Theoretical development of heat transfer model old**

Lesson 37 : **Lec 35 Theoretical development of heat transfer model**

Lesson 38 : **Lec 36 Heating of nano film**

Lesson 39 : **Lec 37 Theoretical development of stress analysis model**

Lesson 40 : **Lec 38 Fundamentals of wire arc additive manufacturing processes I**

Lesson 41 : **Lec 39 Fundamentals of wire arc additive manufacturing processes II**

Lesson 42 : **Lec 40 Modelling approaches of additive manufacturing**

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business@mindluster.com