NPTEL Video Course - Aerospace Engineering - NOC:Lighter than Air Systems

Subject Co-ordinator - Prof. Rajkumar Pant

Co-ordinating Institute - IIT - Bombay

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

Lecture 30 - Tutorial Problem 2 and 3 on Static Lift Estimation
Lecture 31 - Effect of Lifting Gas Purity, Superpressure and Superheat
Lecture 32 - Ballonet Air Weight Estimation
Lecture 33 - Net Static Lift of non rigid airships
Lecture 34 - Net Static Lift for other LTA systems
Lecture 35 - Tutorial Problem 4 on Net Static Lift Estimation
Lecture 36 - Parameters affecting Static Lift
Lecture 37 - Effect of change in Atmospheric Pressure
Lecture 38 - Tutorial Problem 5 on Change in Atmospheric Pressure
Lecture 39 - Effect of Superpressure
Lecture 40 - Tutorial Problem 6 on effect of Superpressure
Lecture 41 - Effect of Slow change in Atmospheric Temperature and Superheat
Lecture 42 - Effect of Rapid change in Atmospheric Temperature
Lecture 43 - Tutorial Problem 7 on Change in Atmospheric Temperature and Superheat
Lecture 44 - Revision and Tutorial Problem 08 and 09 on Affecting Parameters of Static Lift
Lecture 45 - Effect of change in Relative Humidity
Lecture 46 - Effect of change in Lifting Gas Purity
Lecture 47 - Effect of change in Lifting Gas Volume
Lecture 48 - Determination of Inflation Fraction
Lecture 49 - Flight To Lower Ground Elevation
Lecture 50 - Tutorial Problem 10 on Helium Addition
Lecture 51 - Outdoor Hot Air Balloon
Lecture 52 - Pressure Height
Lecture 53 - Tutorial Problem 11 on Pressure Height Calculation
Lecture 54 - Sea Level Inflation Fraction
Lecture 55 - Flight above Pressure Height
Lecture 56 - Effect of Change in Operating Altitude
Lecture 57 - Tutorial Problem 12 on Lifting Gas Loss
Lecture 58 - Descent Following Exceedance
Lecture 59 - Pressure Height for other LTA Vehicles
Lecture 60 - Discussion of Practice Questions
Lecture 61 - Envelope Materials - Part I
Lecture 62 - Envelope Materials - Part II
Lecture 63 - Envelope Materials - Part III
Lecture 64 - Fabric Testing Machines - Part I
Lecture 65 - Fabric Testing Machines - Part II
Lecture 66 - Need for Ground Handling
Lecture 67 - Aerium Hanger for CL 160 Airship
Lecture 68 - Ground Handling of Airships