

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

NPTEL Video Course - Mechanical Engineering - Fundamentals of Industrial Oil Hydraulics and Pneumatics

Subject Co-ordinator - Prof. R.N. Maiti

Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - What is Hydraulic and Pneumatic System
- Lecture 2 - Basic Components, Symbols and Circuits
- Lecture 3 - Incompressible Fluids - Some Fundamental Properties
- Lecture 4 - Incompressible Fluid Flow related to Fluid Drive
- Lecture 5 - Capillary Fluid (incompressible) Flow and Hydrodynamic Lubrication
- Lecture 6 - Basis for Calculating Hydraulic Systems
- Lecture 7 - Different types of Valves - Features and Operations - I
- Lecture 8 - Hydraulic Valves (General) Different types of Valves - Features and Operations - II
- Lecture 9 - Hydraulic Circuits and Valves
- Lecture 10 - Hydraulic Servomechanism and Servo and Proportional Control Valves
- Lecture 11 - Basic Spool Valve Design Analysis
- Lecture 12 - General Control Valve Analysis
- Lecture 13 - Critical Centre Spool Valve Analysis
- Lecture 14 - Critical Centre Spool Valve Analysis - Stroking Forces
- Lecture 15 - Proportional Solenoid Pilot Operated Two Stage Pressure Relief Valve
- Lecture 16 - Proportional Solenoid Pilot Operated Two Stage Pressure Relief Valve (Continued...)
- Lecture 17 - Introduction to Positive Displacement Hydrostatic Units (Hydraulic Pumps and Motors)
- Lecture 18 - Basic features of some Hydraulic Pumps and Motors
- Lecture 19 - Analysis of an axial - Piston Swash Plate type Hydrostatic Pump (Discharge Flow Characteristics)
- Lecture 20 - Analysis of an axial - Piston Swash Plate type Hydrostatic Pump (Estimation of Torque on Drive S)
- Lecture 21 - Analysis of an Axial - Piston Swash Plate type Hydrostatic unit (Pressure Ripple and Swash Plate
- Lecture 22 - Design Analysis of Gear Pumps - I
- Lecture 23 - Design Analysis of Gear Pumps - II
- Lecture 24 - Basic Concept of Hydrostatic Transmission (HST) System
- Lecture 25 - Selection of HST units and components
- Lecture 26 - Regenerative Circuits
- Lecture 27 - Introduction to Fluid Logic
- Lecture 28 - Basic Devices, Symbols and Circuits
- Lecture 29 - Logic Circuits

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

www.digimat.in

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

- Lecture 30 - Design Analysis of ORBIT Motor - I
- Lecture 31 - Design Analysis of ORBIT Motor - II
- Lecture 32 - Design Analysis of ORBIT Motor - III
- Lecture 33 - Application and Selection of Accumulators - Part I
- Lecture 34 - Application and Selection of Accumulators - Part II
- Lecture 35 - Hydraulic Circuits in Industrial Applications
- Lecture 36 - Air preparation - Compressor and Accessories
- Lecture 37 - Pneumatic Circuits
- Lecture 38 - Analysis of Three - Way (Spool and Flapper Nozzle Valve)
- Lecture 39 - Analysis of Flapper Nozzle Valves
- Lecture 40 - Flow Force Compensation and Spool Design (Electro - hydraulic valves)
- Lecture 41 - Premier and Guide to Oil - hydraulic fluids ; and Introduction to Fluid Power Symbols
- Lecture 42 - Symbols in Oil Hydraulics
- Lecture 43 - AppendicesTutorial on Basic Calculation on HST System and Hydraulic Fluids