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An IIT Roorkee Alumnus Venture.....

Catalog for Mechanical and Civil Lab Setup

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Heat Transfer Lab

- Heat transfer through composite wall (HT-01)
- Heat transfer through lagged pipe (HT-02)
- Heat pipe demonstrator (HT-03)
- Thermal Conductivity of Insulating powder (HT-04)
- Thermal Conductivity of Metal Rod (HT-05)
- Thermal Conductivity of Insulating Slab (HT-06)
- Thermal Conductivity of Liquids (HT-07)
- Heat Transfer from a Pin-fin (HT-08)
- Heat Transfer in Forced Convection (HT-09)



- Heat Transfer in Natural Convection (HT-10)
- Emissivity measurement apparatus (HT-11)
- Stefan Boltzmann's apparatus (HT-12)
- Drop wise & Film wise Condensation Apparatus (HT-13)
- Parallel flow/counter flow heat exchanger (HT-14)
- Shell & tube exchanger (HT-15)
- Finned tube heat exchanger (HT-16)
- Vertical & horizontal condenser (HT-17)
- Heat transfer in agitated vessel (HT-18)
- Unsteady state heat transfer unit (HT-19)
- Open pan evaporator (HT-20)
- Single effect evaporator (HT-22)
- Double effect evaporator (HT-23)
- Plate type heat exchanger (HT-24)
- Fluidized bed heat transfer unit (HT-25)
- Heat exchanger teaching setup (HT-26)
- Heat transfer teaching setup (HT-27)

Fluid Mechanics Lab

- Bernoulli's theorem apparatus (HD-01)
- Flow through orifice and mouthpiece (HD-02)
- Discharge over notches (HD-03)
- Impact of jet on vanes (HD-04)
- Losses due to friction in pipe lines (HD-05)
- Losses due to pipe fittings, sudden enlargement & contraction (HD-06)
- Venturimeter & Orifice meter Test Rig (HD-07)

- Venturimeter Orifice meter & Rota meter Test Rig (HD-08)
- Nozzle Meter Test Rig (HD-09)
- Reynolds Apparatus (HD-10)



- Pitot Tube Setup (HD-11)
- Cavitations Apparatus (HD-12)
- Laminar Flow Table (HD-13)
- Met centric Height Apparatus (HD-14)
- Center of Pressure Apparatus (HD-15)
- Electrical Analogy Apparatus (HD-16)
- Forced Vortex Apparatus (HD-17)
- Free Vortex Apparatus (HD-18)
- Darcy's Law Apparatus (HD-19)
- Study of Pressure Measurement (HD-20)
- Bend Meter Test Rig (HD-21)
- Pipe Surge & Water Hammer Apparatus (HD-22)
- Fluid Friction Apparatus (HD-23)
- Hydraulic bench (HD-24)
- Bernoulli's theorem apparatus (HD-25)
- Venturimeter & orifice meter test rig (HD-26)
- Flow over notches (HD-27)
- Flow through orifice & mouthpiece (HD-28)
- Losses due to friction in pipe lines (HD-29)
- Losses in pipe fitting ,sudden enlargement & contraction (HD-30)
- Impact of jet vanes (HD-31)
- Study of pressure measurement (HD-32)
- Pitot tube set-up (HD-33)

Fluid Machinery Lab

- Centrifugal Pump Test Rig (Variable Speed With Swinging Field Dynamometer) (HD-34)
- Centrifugal Pump Test Rig (Variable Speed) (HD-35)

- Centrifugal Pump Test Rig (with Three Prefixed Speeds) (HD-36)
- Centrifugal Pump Test Rig (Multi Stage. Variable Speed. Series & Parallel) (HD-37)
- Reciprocating Pump Test Rig (variable Speed with Swinging Field Dynamometer) (HD-38)
- Reciprocating Pump Test Rig (variable Speed) (HD-39)
- Reciprocating Pump Test Rig With Three Prefixed Speeds) (HD-40)
- Gear Pump Test Rig (variable speed With swinging Field Dynamometer) (HD-41)
- Gear Pump Test Rig (Variable Speed) (HD-42)
- Gear Pump Test Rig (With Three Prefixed Speeds) (HD-43)
- Submersible Pump Test Rig (HD-44)
- Jet Pump Test Rig (HD-45)
- Hydraulic Ram Test Rig (HD-46)
- Pelton Wheel Turbine Test Rig (HD-47)



- Francis Turbine Test Rig (HD-48)
- Kaplan turbine test rig (HD-49)
- Centrifugal Blower Test Rig (HD-50)
- Axial Fan Test Rig (HD-51)
- Wind Tunnel (HD-52)
- Single Stage Air Compressor Test Rig (HD-53)
- Double Stage Air Compressor Test Rig (HD-54)

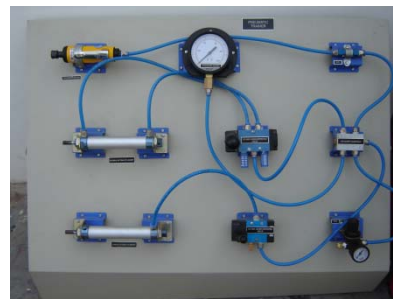


- Fixed Bed Flow Channel Tilting Bed Flow Channel Adjustable Under Shot Weir Rectangular Overshot Weir V-Notch Weir (HD-55)

- Rectangular Sharp Cornered Weir Rectangular Streamlined Weir Crump Weir (HD-56)
- Venturiflume (HD-57)
- Ogee Weir and Manometer Dam Spillway (HD-58)
- Syphon Spillway (HD-59)
- Radial Gate (HD-60)
- Slice Gate (HD-61)

Process Control & Instrumentation Lab

- Pressure control trainer (PC-01)
- Level control trainer (PC-02)
- Temperature control trainer (PC-03)
- Flow control trainer (PC-04)
- Cascade control trainer (PC-05)
- Multi process trainer (PC-06)
- Study of p/i & convertor (PC-07)



- Control valve characteristics (PC-08)
- Characteristics of P.I.D. controller (PC-09)
- Time constant of manometer (PC-10)
- Time constant of thermocouples & thermometer (PC-11)
- Calibration of thermocouples & thermometer (PC-12)
- Measurement of level by air purge method (PC-13)
- Measurement of level by capacitance method (PC-14)
- Two tank interaction system (PC-15)
- Two tank non – interaction system (PC-16)
- Interaction & non interaction system (PC-17)
- Single tank system (PC-18)
- Dead weight pressure gauge tester (PC-19)
- Pneumatic trainer (PC-20)

Chemical Reaction Engineering Lab

- Continuous stirred tank reactor (C.S.T.R) (CRE-01)
- Isothermal (C.S.T.R) (CRE-02)
- Cascade (C.S.T.R) (CRE-03)

- Plug flow reactor (straight tube type) (CRE-04)
- Plug flow reactor (coiled tube type) (CRE-05)
- Isothermal plug flow reactor (coiled tube type) (CRE-06)
- Isothermal batch reactor (CRE-07)
- Isothermal semi-batch reactor (CRE-08)
- Adiabatic batch reactor (CRE-09)
- Packed bed reactor (CRE-10)
- Combined flow reactor (CRE-11)
- Liquid phase chemical reactor (CRE-12)
- Kinetics of dissolution of benzoic acid (CRE-13)
- RTD studies in (C.S.T.R) (CRE-14)
- RTD studies in plug flow reactor (coiled tube type) (CRE-15)
- RTD packed bed reactor (CRE-16)



- Hydrodynamic of trickle bed reactor (CRE-17)
- Emulsion polymerization set up (CRE-18)
- Condensation polymerization set-up (CRE-19)
- Up photo reactor (CRE-20)
- Recycled bed reactor (CRE-21)
- Spinning basket reactor (CRE-22)

Mechanical Operation Lab

- Jaw crusher (MO-01)
- Roll crusher (MO-02)
- Ball mill (with three prefixed speeds) (MO-03)
- Ball mill (variable speed) (MO-04)
- Road mill (MO-05)
- Hammer mill (MO-06)
- Vibrating screen (MO-07)
- Trammel (with three prefixed speed) (MO-08)
- Trammel (variable speed) (MO-09)
- Rotap sieves shaker (MO-10)

- Gyrotory sieves shaker test sieves (MO-11)
- Cyclone separator (MO-12)
- Elutriator (MO-13)
- Magnetic separator (MO-14)
- Froth floatation (MO-15)
- Cone classifier (MO-16)
- Thickener (MO-17)
- Wifely table (MO-18)
- Mineral jig (MO-19)
- Plate & frame filter press (MO-20)
- Rotary vacuum filter (MO-21)
- Leaf filter (MO-22)
- Bucket conveyor (MO-23)
- Belt conveyors (MO-24)
- Screw conveyor (with three prefixed speed) (MO-25)
- Screw conveyor (variable speed) (MO-26)
- Ribbon mixer (MO-27)
- Sigma mixer (MO-28)
- Fluid mixing apparatus (MO-29)
- Power consumption in agitated vessel (MO-30)

Mass Transfer Lab

- Liquid-liquid Extraction in a Packed Tower (MT-01)
- York Schreiber's Extraction Unit (MT-02)
- Spray Tower (MT-03)
- Solid-Liquid Extraction (bonnet Type) (MT-04)
- Solid-Liquid Extraction (Packed Bed Type) (MT-05)
- Bubble Cap Distillation Column (MT-06)
- Sieve Plate Distillation Column (MT-07)
- Packed Bed Distillation Column (MT-08)
- Steam Distillation Set-up (MT-09)



- Simple Batch Distillation (MT-10)
- Absorption in Sieve Plate Column (MT-11)

- Absorption in Packed Bed (MT-12)
- Absorption in Wetted Wall Column (MT-13)
- Vapor in Air Diffusion Apparatus (MT-14)
- Solid in Air Diffusion Apparatus (MT-15)
- Natural Draft Tray Dryer (MT-16)
- Forced Draft Tray Dryer (MT-17)
- Rotary Dryer (MT-18)
- Fluidized Bed Dryer (MT-19)
- Batch Crystallizer (MT-20)
- Swenson Walker Crystallizer (MT-21)
- Wetted Wall Column (MT-22)
- Vapor-Liquid Equilibrium Set-up (MT-23)
- Mass Transfer with & without Chemical Reaction (MT-24)
- (Solid-Liquid) (MT-25)
- Experimental Water Cooling Tower (MT-26)
- Adsorption in packed bed (MT-27)

Theory of Machines Lab

- Universal Vibration Apparatus (TOM-01)
- Cam Analysis Apparatus (TOM-02)
- Whirling of Shaft Demonstrator (TOM-03)
- Static & Dynamic Balancing Demonstrator (TOM-04)
- Motorized Gyroscope Apparatus (TOM-05)



- Journal Bearing Apparatus (TOM-06)
- Universal Governor Apparatus (TOM-07)
- Coriolis's Component of Acceleration Apparatus (TOM-08)
- Michell Tilting Pad Bearing Apparatus (TOM-09)
- Slip & Creep Measurement Apparatus (TOM-10)
- Epicyclic Gear Train Apparatus (TOM-11)
- Pin on Disc Wear Apparatus (TOM-12)

Thermodynamics Lab

- Single cylinder Two Stroke Petrol Engine Test Rig (TD-01)

- Single cylinder Four Stroke Petrol Engine Test Rig (TD-02)
- Four cylinder Four Stroke Petrol Engine Test Rig (TD-03)
- Single cylinder Four Stroke Water Cooled Diesel Engine Test Rig (TD-04)
- Twin cylinder Four Stroke Water Cooled Diesel Engine Test Rig (TD-05)
- Four cylinder Four Stroke Water Cooled Diesel Engine Test Rig (TD-06)
- Separating & Throttling Calorimeter (TD-07)
- Cut Section Model of Actual Single Cylinder Two Stroke Petrol Engine for Plotting Port Timing Diagram (TD-08)
- Cut Section Model of Actual Single Cylinder Four Stroke Petrol Engine for Plotting Valve Timing Diagram (TD-09)



- Cut Section Model of Actual Single Cylinder Four Stroke Diesel Engine for Plotting Valve Timing Diagram (TD-10)
- Computerized Single Cylinder Four Stroke Petrol Engine Test Rig (TD-11)
- Computerized Four Cylinder Four Stroke Petrol Engine Test Rig (TD-12)
- Computerized Single Cylinder Four Stroke Diesel Engine Test Rig (TD-13)
- Computerized Four Cylinder Four Stroke Diesel Engine Test Rig (TD-14)
- Variable Compression Ratio Computerized Diesel Engine Test Rig (TD-15)

Refrigeration & Conditioning Lab

- Refrigeration Test Rig (RAC-01)
- Air Conditioning Test Rig (RAC-02)
- Ice Plant Trainer (RAC-03)
- Water to Water Heat Pump (RAC-04)
- Water to Air Heat Pump (RAC-05)

- Electrolux Refrigerator Test Rig (RAC-06)

Strength of Material Lab

- Universal Testing Machine 20ton & 40ton (Digital) (SOM-01)
- Universal Testing Machine 20ton & 40ton (Computerized) (SOM-02)
- Rockwell & Brinell Hardness Tester (SOM-03)
- Impact Testing machine (IZOD & CHARPY) (SOM-04)
- Torsion Testing Machine (SOM-05)
- Spring Testing Machine (SOM-06)

Production Lab

- CNC Lathe Machine (P-01)
- CNC Milling Machine (P-02)
- Lathe Machine (P-03)
- Milling Machine (P-04)
- Shaper Machine (P-05)
- Drill Machine (P-06)
- Welding set all types (P-07)

Soil Testing Lab

Concrete Lab

Survey Lab

