



CENTRAL TOOL ROOM & TRAINING CENTRE BHUBANESWAR

Course module:

1. Introduction to Pneumatic & Hydraulics system, basic laws used added to these system.
2. Fluid power system and its properties.
3. Fundamental of function and working of different types of pump use in hydraulics system.
4. Fundamental of function and working of different types of compressor use in pneumatic system.
5. DRIVES: Different types of Linear and Rotary actuators construction & it's working for different drive purpose.
6. VALVES: identification, construction, design features and operation of direction control, check valve use in pneumatic & hydraulics system.
7. POSITION CONTROL: Position Control by Limit Switches and Sensor (magnetic reed and other sensors)
8. SPEED CONTROL: Use of Different Types of flow control Valves.
9. LOGICAL CONTROL: Use of AND/ OR valves
10. PRESSURE CONTROL: Use of pressure sequencing, pressure reducing & pressure relief valves.
11. TIME DEPENDENT CONTROL: Use of timer valves.
12. MEASUREMENT TECHNIQUE : Pressure , flow and on load & off load calculation.
13. Symbol & graphical study of different components use in Pneumatic & Hydraulics system
14. Fundamental in electro pneumatic control technology control chain electric symbols used for contacts, relay, timer and other device.
15. Working with Electro Pneumatic & Electro Hydraulics system.
16. Construction and working of solenoid operated direction control valve, magnetic, inductive, optical, capacitive, pressure & flow sensor.
17. Failure and Troubleshooting in fluid power system.