

Fundamentals of Fluid Power—Hydraulics



Level 1

This hydraulic training certification equips students with comprehensive knowledge of hydraulic components' construction and operation. By examining a wide range of hydraulic equipment, the certification delves into fundamental hydraulic principles and the specifics of individual components. It covers key elements such as valves that control pressure, flow rate, sequence, and direction. Through practical exercises and standard symbol circuits, students gain hands-on experience in operating these valves. Additionally, the certification emphasizes maintenance practices and a systematic approach to fault finding, ensuring students are prepared for real-world applications.

Industry Recognized Certification Topics

- Equipment and circuit diagram symbols, reading and interpreting basic hydraulic circuit diagrams
- Physical principles of hydraulics
- Structure and mode of operation of basic components
- Measure volumetric flow and pressure
- Technology and characteristic data of valves and drive elements
- Intensive training for industrial practice: setting up systems in accordance with circuit diagrams, commissioning systems
- Fundamentals of proportional hydraulics

Industry Recognized Certification Competencies

- Design, assemble, test, and troubleshoot basic hydraulic circuits
- Identify and describe the construction, design features, and operation of hydraulic components
- Interpret technical specifications and data relating to hydraulic components and systems
- Identify and explain graphical symbols for hydraulic components
- Describe fundamentals of oil flow

Units - 3 / Labs - 12

