

FSP

Fundamentals and Service of Proportional Valves – 5 days

Plant maintenance personnel of all levels learn the function & operation of electro-proportional hydraulic valves and their interface electronic amplifiers – recommended for the mechanical trades and the electrical trades

What you will learn –

- The similarities between manual directional controls and proportional directional controls
- The principles of speed control (throttle valve principle)
- Force and stroke controlled solenoids as applied to electro-proportional valves
- Controlling direction, actuator speed, actuator acceleration/deceleration with proportional valves
- Spool position feedback directional control valves
- Standard proportional directional controls
- High performance and servo-solenoid directional controls
- Proportional pressure control valves
- Proportional flow control valves
- Electronic interface amplifiers that drive proportional valves
- Integrated electronics/on-board electronics
- Rexroth branded and Bosch branded proportional valves
- Learn to troubleshoot proportional valve systems and isolate problems

Electro-proportional hydraulic valves have become a main-stream component in most hydraulic powered and controlled machines and processes. These valves are an active part of the process control system. It is important that mechanical and electrical maintenance personnel develop a thorough understanding of how these valves are applied and how they operate. For this purpose there will be ample time devoted to the disassembly, inspection and assembly of several valve types. Students will configure the electronic interface and place the valve in a circuit to observe the operation. Through this hands-on approach, students will develop their setup and troubleshooting skills. This 5 day training course is also a proper starting point for plant engineering personnel prior to our advanced PSD course.

Prerequisites: MRS course or equivalent knowledge of hydraulic principles

Approximately 50% lecture and 50% hands on lab exercises