



COURSE TITLE

CONTROL VALVE – BASIC UNDERSTANDING & MAINTENANCE



BUILDING COMPETENCE, INSPIRING CONFIDENCE

Course Objectives

To provide practical knowledge of control valve operation, components, accessories, and maintenance practices for improved reliability and safe plant operation.

Target Audience

- Instrumentation maintenance Engineers
- Plant operators



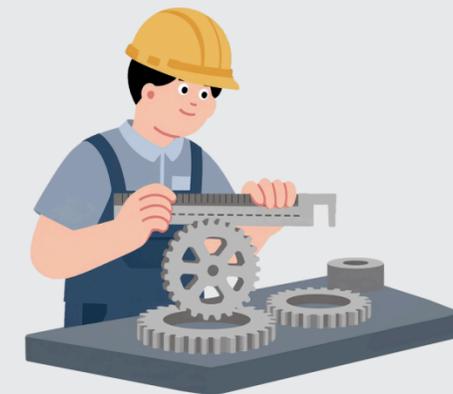
Course Outline

Day 1 – Control Valves & Actuators

- Control valve fundamentals and terminology
- Actuator types: diaphragm, piston, rack & pinion, scotch yoke, vane
- Pneumatic, hydraulic, electric & manual actuators
- Globe and rotary valves

Day 2 – Valve Construction & Types

- Valve body, bonnet, and trim materials
- Special valves: choke, diaphragm, pinch, deluge, deadman, orbit
- Ejectors and desuperheaters



Course Outline

Day 3 – Accessories & Maintenance

- Packing box assembly and body connections
- Actuator bench set and calibration
- Positioners and smart positioner (DVC 6200)
- Valve removal and common problems

Day 4 – Advanced Topics & Practical Skills

- Cavitation, flashing & leakage classification
- Gaskets, lubricants, O-rings, washers
- Lapping, seat ring removal tools
- Split-range valves & valve signature
- Rigging, hardness testing & warehouse practices



Instructor



Mr. Aftab Ahmed Mazari **Instrumentation Expert**

Mr. Aftab Ahmed Mazari has over 43 years of extensive practical experience as an Instrument Engineer. He completed his science graduation from Punjab University and received industrial instrumentation training from Russia.

He began his professional career at Pakistan Steel, where he served for 10 years. He later joined Fauji Fertilizer Company (FFC) and retired after completing 30 years of service with rich and diverse experience. Following his retirement, he worked as an Instrument and Consultant Engineer with SABIC in Saudi Arabia for one year.

Mr. Aftab Ahmed Mazari possesses wide expertise in instrumentation consultancy, Reliability Centered Maintenance (RCM), reliability engineering, and professional training. He has delivered training programs and courses to both local and international clients, including SABIC in Saudi Arabia and multinational companies such as ENI, Lotte, BHP, Engro, and HUBCO.

He has developed several training aids for instrument engineers and technicians, including simulators and training rigs such as vibration simulators, vibration switch testing rigs, speed simulators, compound gear simulators, and SOV training rigs. In addition, he has designed and produced cutaway models of control valves, pressure safety valves (PSV), rotameters, temperature sensors, pressure regulators, volume boosters, and trip relays.

Mr. Aftab Ahmed Mazari has also authored eight industrial instrumentation books for instrument and operations personnel, which are widely referred to in various industrial facilities across Pakistan.

Logistics

Duration

4-Day Training Program

Location

Client site or Lahore

Training Instructors

Mr. Aftab Ahmed Mazari

Get in Touch

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