

NAPTA RECOMMENDED LEARNING OUTCOMES

PROCESS INSTRUMENTATION

1. Using knowledge of symbols, process diagrams and instrumentation, sketch a simple process diagram, including control loops.
2. Describe the various process variables (flow, level, pressure, temperature, analytical, etc.) found in a plant and explain how instruments are used to sense, measure and transmit this information to the control system.
3. Identify the types of control loops (simple and complex) and explain their operation.
4. Identify the components of a closed control loop (primary element, transmitter, controller, transducer, final element) and explain their interrelationships.
5. Identify typical instrument malfunctions found in control loops and explain how they may affect a process (cause and effect).