Instrumentation Principals

Course Objectives

1. State the purpose of process instrumentation.
2. Explain the role of instrumentation in a closed control loop model (sensor, transmitter, controller, final control element).
3. Describe categorization of instrument by functions.
4. Describe categorization of instruments by location.
5. Describe categorization of instruments by power source.
6. Describe categorization of instruments by signal type.
7. Explain the role of instrumentation symbols in P&IDs.
8. Recall the four process variables most commonly monitored by process instrumentation.

Key Terms (Define the following)

Feedback control - _____

_____

Open-loop control - _____

_____

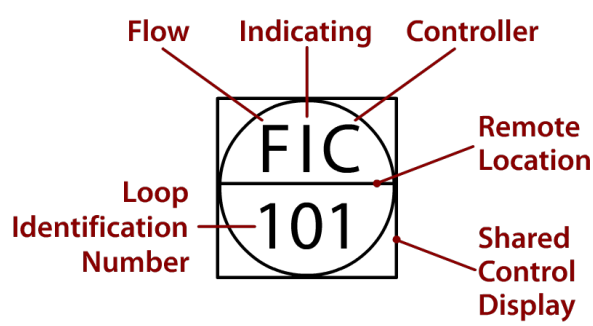
Pressure transmitter - _____

_____

Control loop model - _____

_____

Principles



Questions

1. Feedback control is also called _____ - _____ control.

2. Information in a typical feedback loop flows from a sensor to a _____ .

3. The final control element directly affects the _____ if the feedback loop is working properly.

4. A transducer is an example of a _____ instrument.

5. What are the 4 basic types of signal transmission used for process instrumentation?
   1) _____
   2) _____
   3) _____
   4) _____