



Introduction to Chemical Manufacturing

P&ID

Course Objectives

1. Describe the purpose of a Process and Instrumentation Diagram (P&ID).
2. Identify the parts of a P&ID.
3. Identify symbols and abbreviations commonly used in a P&ID.
4. Interpret specific symbols and abbreviations for line names and instrumentation.
5. Trace and interpret a process line on a P&ID.



Key Terms (Define the following)

piping and instrumentation diagram (P&ID) - _____

block flow diagram - _____

process flow diagram - _____

legend - _____

interlock - _____



Questions

1. List the uses of a P&ID.

2. Where on a P&ID would you find each of the following?

P&ID drawing number - _____

Symbols that represent the equipment and process flow - _____

A list of related drawings - _____

Changes - _____

Special comments such as safety information - _____

Use the Classroom P&ID, the Symbols Legends, and Identification Letter Table for the questions below.

3. Describe the function of each of the following:

Ex:

TI19 - measures the temperature of the process flow before it enters Process Cooler E-103A

TI21 - _____

RV6 - _____

LT1 - _____

4. From what P&ID does this process flow? _____

5. Which temperature indicator measures the temperature in the reactor and sends it to the DCS?

6. The cooling water flows through what type of manual valve before enter the Process Cooler E103-B?

7. Identify the only automated valve in this system. _____

8. What is the function of the software link between LT-1 and LC-1?

9. Identify one parameter that must be checked by a field operator?

1) _____