

**TERMS TO BE DEFINED OR IDENTIFIED for COMPETENCY 12:**

- Assembly drawing
- Working drawings
- Sub-assembly
- Detail drawing
- Outline assembly drawing
- Zones
- ECO
- ECN
- Spool drawing

**ITEMS FOR REVIEW for COMPETENCY 12:**

- Components that make up an assembly drawing:
  - Sections
  - Enlarged views
  - Processes
- The exact material to be used in part manufacturing should always be specified.
- Special information should be noted on the drawing.
- Numbers and names, as required, should be on the drawing.
- Non-standard parts are shown on detail drawings.
- Zones locate specific points on the drawing using the coordinate system.
- An Engineering Change Order (ECO) or Engineering Change Notice (ECN) is used for changes in components, assemblies, or documents such as processes and work instructions. It may also be used for changes in specifications.
- A “spool drawing” would be used by pipe fitters and welders to show how a set or group of pipes should be installed. It also shows how the individual pipes are connected to each other.
- A piping isometric drawing is a type of three-dimensional drawing showing the pipe run and most importantly, rise locations in relation to other pipes.

Define and describe the components that make up a detail drawing.

- Necessary multiviews'
- Dimensional information
- Identify part/part number
- Part material
- Engineering changes (Revision Block)
- Drafter/checker names
- Assembly the part fits/quantity required
- General notes with manufacturing information

Define and describe the components that make up an assembly drawing.

- Arrangement of parts
- Sections required to show internal features
- Enlarged views to show detail
- Parts list/bill of materials
- Reference item numbers keyed to BOM
- Manufacturing processes required during assembly