

# ATPF-1270: SPRINKLER DRAWINGS

## Cuyahoga Community College

### Viewing: ATPF-1270 : Sprinkler Drawings

**Board of Trustees:**

2012-06-28

**Academic Term:**

Spring 2019

**Subject Code**

ATPF - Applied Ind Tech - Pipefitters

**Course Number:**

1270

**Title:**

Sprinkler Drawings

**Catalog Description:**

A study of sprinkler systems and techniques used to produce sprinkler drawings used by pipefitters in the construction industry. In addition, interpretation of fire suppression drawings and relative piping will be thoroughly addressed.

**Credit Hour(s):**

4

**Lecture Hour(s):**

4

### Requisites

**Prerequisite and Corequisite**

Departmental approval: admission to Pipefitter's apprenticeship program.

### Outcomes

**Course Outcome(s):**

1. Identify fire protection systems

**Objective(s):**

1. Distinguish various types of fire protection systems.
2. Describe the differences between wet, dry and chemical systems.

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**Course Outcome(s):**

2. Differentiate pipe joining connections.

**Objective(s):**

1. Describe the processes used to connect pipe using mechanical operations.
2. Demonstrate the process of joining pipe using screw connections.

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**Course Outcome(s):**

3. Interpret two- dimensional and shop drawings that are used in sprinkler pipe fitting.

**Objective(s):**

1. Identify the various fire protecting system as shown on construction drawings.
2. Recognize the differences between above ground and below grade installations.
3. Sketch fire protection installation systems using conventional drafting techniques.

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**Course Outcome(s):**

4. Install fire protection systems.

**Objective(s):**

1. 3. Identify and compile a material list of the various pipe, valves and fittings needed for installation.
2. 4. Formulate a strategy for construction.
3. 1. Review construction drawings and select the mechanical, shop and isometric drawings that are required for systems installations.
4. 2. Employ all safety regulations as prescribed in the occupational safety and health administration standards.

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**Methods of Evaluation:**

1. Quizzes
2. Tests
3. Class participation

**Course Content Outline:**

1. Fire protection systems
  - a. Wet systems
    - i. Piping
    - ii. Detection
    - iii. System activation
  - b. Dry
  - c. Chemical
    - i. Pipe selection
    - ii. Chemical powders
    - iii. Foam
2. Joint connections
  - a. Mechanical
    - i. Fittings
    - ii. Piping
  - iii. Equipment
  - iv. Groove depth
- b. Screw connections
  - i. Thread cutting
  - ii. Die selection
3. Drawing sprinkler systems
  - a. System identification
    - i. Wet
    - ii. Dry
    - iii. Chemical
  - b. Above ground
  - c. Below grade
  - d. Techniques
    - i. Drafting
    - ii. Symbols and conventions
    - iii. Line weights
4. Installation
  - a. Drawing selection
    - i. Mechanical
    - ii. Shop
    - iii. Isometric
  - b. Safety
    - i. Fall protection
    - ii. Trenching
    - iii. Aerial lifts
    - iv. Scaffolds
    - v. Personal protective equipment
  - c. Material

- i. Pipe
- ii. Valves
- iii. Fittings
- d. Strategy for installation
  - i. Installation sequence
  - ii. Material and equipment layout
  - iii. Suspension systems

## Resources

United Association Training Department. *Drawing Interpretation and Plan Reading Manual*. current. United Association Training Department Annapolis Md, 2011.

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NFPA. *NFPA 13: Standard for the Installation of Sprinkler Systems*. current. NFPA, 2011.

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(S.D. Bowman). *Ordinates for 1000 Pipe Intersections*. current. Claitor's Pub. Baton Rouge,La., 2011.

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## Resources Other

[www.barnesandnoble.com/.../http://www.barnesandnoble.com/.../ordinates-for-1000-pipe-intersections...bowman/](http://www.barnesandnoble.com/.../http://www.barnesandnoble.com/.../ordinates-for-1000-pipe-intersections...bowman/)**ordinates-for-1000-pipe-intersections...bowman**  
[www.booksamillion.com/.../Ordinates-Pipe-Intersections/...Bowman/9781579801724](http://www.booksamillion.com/.../Ordinates-Pipe-Intersections/...Bowman/9781579801724) -  
[www.langtoninfo.com/showitem.aspx?isbn=1579801722](http://www.langtoninfo.com/showitem.aspx?isbn=1579801722)

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