

ATPF-2340: STEAM SYSTEMS

Cuyahoga Community College

Viewing: ATPF-2340 : Steam Systems

Board of Trustees:

2012-06-28

Academic Term:

Spring 2019

Subject Code

ATPF - Applied Ind Tech - Pipefitters

Course Number:

2340

Title:

Steam Systems

Catalog Description:

Instructional course describing the proper installation, service and repair of steam piping systems in various commercial and industrial situations.

Credit Hour(s):

2

Lecture Hour(s):

2

Requisites

Prerequisite and Corequisite

Departmental approval: admission to Pipefitter's apprenticeship program.

Outcomes

Course Outcome(s):

1. Identify various steam systems.

Course Outcome(s):

2. Layout and install steam systems

Course Outcome(s):

3. Identify various steam boilers

Methods of Evaluation:

1. Tests
2. Quizzes
3. Class participation

Course Content Outline:

1. Steam Systems
 - a. One-pipe steam heating system
 - b. Two-pipe steam heating system
 - c. Vacuum steam heating system
 - d. Safety practices within the steam system
2. Working parts of Steam System

- a. Float & thermostatic steam trap, inverted bucket trap
 - b. Thermodynamic steam trap
 - c. Pressure reducing valve
 - d. Pressure relief valve
 - e. Pipe, fittings, guides and supports
3. Steam Boilers
- a. Low pressure steam boiler
 - b. High pressure steam boiler
 - c. Heat Exchangers
 - i. Shell and Tube
 - ii. Plate heat exchanger
4. Safety Devices
- a. High water cut-off, low water cut-off
 - b. Safety Relief Valve

Resources

United Association. *Steam Systems*. current. United Association Annapolis, Md., 2011.

Thomas W. Frankland. *Pipe Trades*. existing. Bruce Pub. Co Dallas, TX., 2000.

Thomas W. Frankland. *Pipe Template Layout*. existing. Glencoe/Mcgraw-Hill N.y./Ny., 2005.

Resources Other

BestPractices **Steam System** Performance Tools. 26. **Steam System** Training. 28 ...

www1.eere.energy.gov/industry/bestpractices/.../

www.flowserve.com/Products/Steam-Traps-and-Systems -

www.armstronginternational.com/ (<http://www.armstronginternational.com/steam-system/>)**steam-system**

completewatersystems.com/brands/hoffman-specialty/

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