

Framework for an Apprentice Enrolled in a 6000 Hour Program

Not less than 350 Hours of ASME Code Instruction

To include at a minimum:

- Components and Systems
 - Materials, valves, piping, fittings, etc.
- Types of Systems
 - Chill water, hot water, steam, condensate, category M fluid service
- Massachusetts General Law Chapter 146, 528 CMR,
- ASME Code
 - Section IX Welding, B31.1 Power Piping, B31.3 Process Piping
 - 522 CMR Boundaries of ASME Sections I, IV, VIII and NBIC CSD-1 Safety Devices
- Joining Methods
 - Threaded, Compression, Fusion-SMAW-GTAW-Brazing, Flanges, Victaulic, etc.
- Supports and Hangers
 - Provisions for expansion
- Schematics, Drawings, Piping and Instrument Diagrams
- Calculations
 - Trade Math
- Non Destructive Examination
 - Pressure testing, leak testing, hydrostatic testing, magnetic particle testing, x-ray, etc.
- Cutting Methods and Techniques

Other suggested areas of study outside of the requirements:

- OSHA Safety Certification (OSHA 10)
- OSHA Hazard Communication Standard
- Lock Out / Tag Out (LOTO)
- Hot-work Requirements and Local Permit Requirements

Framework for an Apprentice Enrolled in a 4000 Hour Program

Not less than 200 Hours of ASME Code Instruction, and 500 Hours of Pipefitting Study with 250 hours being shop related work.

To include:

- OSHA Safety Certification (OSHA 10)
- OSHA Hazard Communication Standard
- Lock Out / Tag Out (LOTO)
- Hot-work Requirements and Local Permit Requirements
- Components and Systems
 - Materials, valves, piping, fittings, etc.
- Types of Systems
 - Chill water, hot water, steam, condensate, category M fluid service
- Massachusetts General Law Chapter 146, 528 CMR,
- ASME Code

- Section IX Welding, B31.1 Power Piping, B31.3 Process Piping
- 522 CMR Boundaries of ASME Sections I, IV, VIII and NBIC CSD-1 Safety Devices
- Joining Methods
 - Threaded, Compression, Fusion-SMAW-GTAW-Brazing, Flanges, Victaulic, etc.
- Supports and Hangers
 - Provisions for expansion
- Schematics, Drawings, Piping and Instrument Diagrams
- Calculations
 - Trade Math
- Non Destructive Examination
 - Pressure testing, leak testing, hydrostatic testing, magnetic particle testing, x-ray, etc.
- Cutting Methods and Techniques

Framework for an Apprentice Enrolled in a 2000 Hour Program

Not less than 200 Hours of ASME Code Instruction, and 1000 Hours of Pipefitting Study with 700 hours being shop related work.

To include:

- OSHA Safety Certification (OSHA 10)
- OSHA Hazard Communication Standard
- Lock Out / Tag Out (LOTO)
- Hot-work Requirements and Local Permit Requirements
- Components and Systems
 - Materials, valves, piping, fittings, etc.
- Types of Systems
 - Chill water, hot water, steam, condensate, category M fluid service
- Massachusetts General Law Chapter 146, 528 CMR,
- ASME Code
 - Section IX Welding, B31.1 Power Piping, B31.3 Process Piping
 - 522 CMR Boundaries of ASME Sections I, IV, VIII and NBIC CSD-1 Safety Devices
- Joining Methods
 - Threaded, Compression, Fusion-SMAW-GTAW-Brazing, Flanges, Victaulic, etc.
- Supports and Hangers
 - Provisions for expansion
- Schematics, Drawings, Piping and Instrument Diagrams
- Calculations
 - Trade Math
- Non Destructive Examination
 - Pressure testing, leak testing, hydrostatic testing, magnetic particle testing, x-ray, etc.
- Cutting Methods and Techniques