

Steamfitting Scope Document

Steamfitter/Pipefitter (Post-Secondary) 2024

Contest Length: 6 hrs

Check in time: 7:00 am

Contest Start: 7:30 am

Contest Sponsors: UAPICBC

Technical Committee

Jordan Falk

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Purpose of the Challenge:

To assess the contestant's knowledge and skills in the layout and fabrication of a piping system and components, with high regard to the aspects of quality, workmanship and accuracy of work.

Eligibility:

Contestants must have completed a college level *Steamfitter/Pipefitter* foundations program or their Level 1 *Steamfitter/Pipefitter* apprenticeship technical training.

Skills & Knowledge to be tested:

- Application of Mathematical concepts involving piping and piping layouts
- Reading and interpreting diagrams and specifications
- Assembling and fabricating a piping system
 1. measure, cut, thread, bend piping and tubing
 2. use tools & equipment to join pipe and fittings by means threading, bending, and welding.
 3. Setup and conduct pneumatic pressure test for piping system
 4. applying safe work practices

Equipment / Tools / Materials

Supplied by Committee:

Tools:

- Pipe Stand
- Tri-Stand
- Protractor
- Angle Finder
- Tape Measure
- Center Punch
- Tri-stand
- Power cords (GFCI)
- 2' Level
- 9" Level
- Wrap-a-round
- Soap stone
- Pen
- Permanent marker
- Ball Peen Hammer
- 2' square
- Tri Square
- Half Round File
- Threading Machine
- 1"-2" Threading Die Head
- Threading Oil
- Tubing Compression Benders
- 24" Pipe Wrenches
- 18" Pipe Wrenches
- 14" Pipe Wrenches
- Spud Wrench
- 12" Adjustable Wrench
- 6" Adjustable Wrench
- Fitting gloves
- Face shield
- Safety glasses
- Ear plugs
- Testing equipment

Materials:

- 2" A53 2" Pipe
- 1" A53 1" Pipe
- 3/8" SS Tubing
- Threaded Fittings

- Socket Weld Fittings
- Compression Fittings
- Teflon Tape & Pipe Dope

Supplied by Contestant:

- Steel toe boots and appropriate work clothing

Suggested List (optional)

- Pocket Calculator

Safety

It is mandatory for all competitors to wear CSA approved eyewear (including side shields for prescription eyewear).

It is mandatory for all competitors to wear CSA approved footwear

Jewelry such as rings, bracelets and necklaces or any items deemed unsafe by the Judges shall be removed.

Proper shop attire is to be worn (no loose straps, baggy sleeves). Any attire that is deemed unsafe by the Judges will not be permitted. Long sleeves mandatory for all hot work.

Care to be given to spectators

Competition Judges will have final authority over matters of safety.

Judging Criteria

Item	Details	Points
Threaded Piping Dimensions	Correct thread engagement, level/ square/ plumb, All dimensions specified to be deducted 1 point per 1/16" out after the first 1/8"	/30
Tubing	Correct Dimension - All dimensions specified to be deducted 1 point per 1/16" out after the first 1/8" Correct 45 Deg. Angle – 1 point subtracted per deg. Off correct angle	/20
Socket Welded Piping	Level/ square/ plumb, fitting tacked in four evenly spaced positions, All dimensions specified to be deducted 1 point per 1/16" out after the first 1/8"	/25
Socket Weld Gapping	All socket welds have correct 1/16"-1/8" internal fitting gap	/5
General	General aesthetics included cleanliness of project ex. Excess pipe dope, wrenching marks, rounded corners on material	/5
Pneumatic Pressure Test	Projects maintains 15psi pneumatic pressure test for 5 minutes	/5
Safety	Proper use of PPE, safe work/ proper use/ practices with tools/ machines/ welders, ensures safety to bystanders, co-operation with fellow contestants, pleasant with welders, etc.	/10
Total		/100

- Full marks for dimensions within +/- 1/8" (each additional 1/16" = 1 mark deduction)
- Point deducted per additional material request – 10 points
- Point deducted per additional information request – 5 points
- All dimensions to be in inches or mm
- Safety glasses to be worn at all times when in the working area. There will be a 1 point deduction for every reminder to wear glasses.
- All incomplete projects will be judged and not receive a mark higher than 50%
- In the event of a tie the competitor using the least amount of time will be declared the winner.

Competition Area Supervisor

Jordan Falk

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