



Travis County Youth Show Welding Contest Description & Rules

All registration must be completed online by your AST/CES leader and postmarked to the TCYS office by the date listed in the rule book. **Late registrations WILL NOT be accepted.**

Students will need to bring:

- Safety glasses (to be worn at all times during the contest), welding hood, gauntlet welding gloves, and welding jacket or sleeves
- Tools: Tape measure, soap stone, chipping hammer, wire brush, vise grip clamp to pick up and move hot pieces, combination square, and striker
- Shade #3 or #5 Oxy/Acetylene goggles, or face shield
- Appropriate shirts and pants (denim preferred & 100% cotton mandatory) with work boots

Contest Description:

1. Contestants will be given a 3/8"x 8"x 8" piece of plate to be cut with the OFC process. Contestants will also be given a piece of 4" Schedule 40 pipe which will not be cut by the contestant. Actual sizes of the base piece will be given on the day of the contest. Contestants will need to be accurate using a tape measure and square to complete their layout and cut within the given sizes. **Be sure not to cut off the stamped Contestant Number.** This should be located when finished as shown on the drawing (bottom right hand corner next to line C). No grinding allowed. Reference Layout and Cut Sheet.
2. Contestants will then lay out the piece they cut according to the Cut Sheet by marking an X through the center of the plate from corner to corner. It would then be wise to label each corner by letter as given on the Weld Sheet (Note the location of the Contestant Number).
3. The contestant will tack weld the base plate to the angle arm in the welding booth at the location given on the Weld Sheet. There will not be any welding tables in the booths to setup and tack the parts together. The piece is to stay tacked to the arm for the entire process once started. After the first process is complete; a judge will give the contestant permission to break their tack and move to the next station, where they will re-tack the weldment in the same location before welding.
4. The contestant will then tack the 4" Schedule 40 Pipe to the 3/8" plate. The pipe must be centered and square to the base. It would be wise to place the tacks at the start and termination locations of each specified weld. Tacking will be done by either process, depending on which station you begin with. This will be based on what booth is available when starting. It is recommended to practice tack welds using both processes.
5. The SMAW part of this contest requires two operations. All welding will be done in the 2F Position. The first SMAW weld will be 1/8" E6010 root pass to run from Point A to Point C (1/2 the diameter of the pipe). The second operation will be a 1/4" Fillet Weld Using 1/8" E7018. This will be the cover pass and will run from Point A to Point C (1/4 the diameter of the pipe).
6. The GMAW part of this contest will be a single operation. The weld will run from Point A to Point C as shown on the drawing (The other half of the pipe diameter). Contestants will complete a 3/16" fillet weld, and use .035" ER70S-6 for this operation.
7. Contestants need to make sure they clean and cool their entire weldment thoroughly before turning it in. Cleanliness will be a scored item. This will complete the contest. Please also see the included score sheet so that every contestant will know exactly how they will be scored.