

T.O.P.S. CHALLENGE-WELDING/CUTTING

TOOL LIST: SMAW plate and Combination Welding

Welding Helmet with appropriate filter lens

PPE-Gloves, Safety Glasses, Ear Plugs, Long Sleeve Shirt (Cotton) or FR Jacket, Appropriate Pants, and Footwear. Students that do not have/wear the appropriate clothing/PPE will not be allowed to compete.

Chipping Hammer

Hand Wire Brush

4-1/2" Grinder with 1/4" wheel and wire wheel

Welpers

12" Combination Square

Soapstone

Tape Measure-Easy read will not be allowed

16 oz. Ball Pein Hammer

Clear Face Shield or Flip Lens Welding Helmet for Grinding

Vice Grips or Channel Locks

Flash Light is Optional

TOOL LIST: OXY/FUEL Cutting

PPE-Gloves, Safety Glasses, Long Sleeve Shirt (Cotton) or FR Jacket, Appropriate Pants, and Footwear. Students that do not have/wear the appropriate clothing/PPE will not be allowed to compete.

Chipping Hammer to remove dross

Striker and Tip Cleaner

Tinted Face Shield or Cutting Goggles

12" Combination Square

Tape Measure-Easy read will not be allowed

16 oz. Ball Pein Hammer

Center punch and Compass

Soapstone

Competition will consist of three parts: Oxy/Fuel Cutting, SMAW Plate Welding with E6010/E7018 electrodes, and Combination Welding. Combination will consist of three welding processes: FCAW with .045 wire, GMAW short circuit with .035 solid wire, and SMAW with E7018 electrodes. Students competing in either Cutting or SMAW plate will have 30 minutes to complete their task. Students competing in the Combination portion will have 45 minutes to complete their task. A laminated print and WPS will be in each station for the students. Machines and gauges will be zeroed out at the start of each competition. Students must set their own equipment. No instructors will be allowed in the lab during the competition.

Each judge will have a score card to record the student's competition number, along with their individual scores. The plates must be marked by the judges with the number before it can be taken off the stands. Welders competing in the SMAW plate may be subjected to a bend test, therefore should not quench their plates unless told to by the judges. The top five welders selected by the judges will be subjected to destructive test. The judges will lay out the plates, plasma cut the coupons out, and then the student must prepare them for the bend test. Two side bends will be performed by a CWI. If a student has a coupon bust, they will move back in their standings, if all bust, the judges will refer to the visual acceptance and score cards. All acceptance criteria will be in accordance AWS/ASME section IV standards. Only the top three students will receive prizes for each competition.

Points will be deducted for the following:

Strike marks outside the bevel, excessive undercut, porosity, cold lap/lack of fusion, slag inclusions, Improper weld sizes (+/- 1/16"), Incomplete welds, welds completed in the wrong position/process that do not match the print, and removing any PPE while competing. Judges will check for accuracy using templates, fillet weld gauges, G.A.L. gauges, V-WAC gauges, and tape measures.

Competition will begin at 9 A.M. sharp on Friday February the 7th. If you have any questions or concerns, please don't hesitate to contact me. I would like to thank all of the welding instructors for their dedication in making a difference in these students career choice and working to make them the best welders they can be for our industry. Safe travels and good luck welders!!!!

Sincerely,

Brent Carroll, CWE/CWI

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