Welding

Date	February 10, 2024	**Orientation Time**	8:00 a.m. (OPEN to instructors)
Location	Hobart Institute of Welding Technology 400 Trade Square East Troy, Ohio 45373	**Contest Time**	Immediately following orientation (CLOSED contest)
Scope of Contest	The skill performance assessment may include steel project(s), aluminum project(s), stainless steel project(s) in various positions using a variety of filler metals. Competitors will be involved in a series of stations testing various aspects of welding. • Competitors must correctly use the welding equipment during the competition. The contest coordinator or any judge may stop a competitor at any section of the competition if they deem a competitor's manner to be hazardous to either themselves or others. Such a stoppage shall be documented as a warning. If the competitor is warned a second time, he or she may be disqualified for that section of the competition. • As soon as the competitors enter the competition area, no communication shall occur between the competitors or between the competitors and anyone else, except as directed by the contest coordinator or judges. Any such communication may result in the competitor being disqualified from that section of the competition. • Time limits will be established during the competition orientation. • Evaluation of the completed project will be judged visually. Nondestructive and/or destructive tests may be used to complete the project evaluation. • Welding and cutting instructions will be provided to the competitors and specified on the Welding Procedure Specifications (WPS) and prints provided in the welding booths and near cutting stations. • Welding equipment used in the competition may be obtained from a variety of manufacturers and may include transformers, rectifiers and/or inverters. • Filler metals will be detailed on the Welding Procedure Specification (WPS) and/or prints. • Welds will be evaluated visually using a scoring system as established by the contest coordinator. Nondestructive and/or destructive tests may be used to complete the project evaluation. • Print assembly tolerance will be +/- 1⁄16" unless otherwise noted. • If no print assembly dimensions are given to orient any project part, the part is to be approximately located based on the print's isometric view.		
Testing	No		
Eligibility	1 contestant for every 50 paid members enrolled in program		
Clothing	Work Attire: Field specific work clothing required for the work environment or that matches the service conditions for the contest. This may include jeans if they are clean and professional looking and are accepted in the respective field (no holes or overly soiled pants). Work shoes or boots with a hard sole or anti-slip properties (steel toes may be required – refer to **Provided by Contestant**		

	section below). Clothing should be as such that it will not get caught in moving equipment or power tools. School uniforms may be worn if they meet the above requirements with all identifiers covered.	
Provided by Contestant	Professional Resumé – typed hardcopy Emergency Medical Form (Contestants must have this to compete) Leather welding jacket Fireproof face mask Hearing and/or ear protection Welding helmet with appropriate filter plate/lens and protective cover plate/lens in a flip or slide front. Auto darkening shields are permissible Spare spatter and filter lenses/plates for arc welding helmet and oxyacetylene goggles Pocket calculator Lead pencil and/or ballpoint pen Soap stone with holder Scribe with magnet Combination square set 10-foot (3.1 meters) steel tape measure Fillet weld gauge 16-ounce (.45 kilogram) ball peen hammer Center punch 10-inch (254 millimeters) vise grips 6-inch (152 millimeters) side cutting pliers or diagonal cutting pliers 6-inch (152 millimeters) needle nose pliers Chipping hammer with or without wire brush Stainless steel wire brush	
Contest Standards	**Contest Skilled Performance Standards**	**Aligned ODE Manufacturing Career Field Technical Content Standard Outcomes**
	WF 3.0 – Read and interpret blueprints	**Outcome 6.1** Measurement and Interpretation
	W 4.0 - Produce welds using a Shielded Metal Arc Welding (SMAW) process to AWS QC10 standards.	**Outcome 4.3** Arc Welding Process
	W 5.0 - Produce welds using a Gas Metal Arc Welding (GMAW) process to AWS QC10 standards.	**Outcome 4.3** Arc Welding Process
	W 6.0 - Produce welds using a Fluxed Cored Arc Welding (FCAW) process to AWS QC10 standards.	**Outcome 4.3** Arc Welding Process
	W 7.0 - Produce welds using a Gas Tungsten Arc Welding (GTAW) process to AWS QC10 standards.	**Outcome 4.3** Arc Welding Process

	W 8.0 - Produce cut materials using an Oxygen Fuel Cutting (OFC) process to AWS QC10 standards.	**Outcome 4.6** Cutting Processes Above Outcomes can be found in the following ODE courses: 176000 Gas Metal Arc Welding 176001 Shielded Metal Arc Welding 176002 Flux Cored Arc Welding 176003 Gas Tungsten Arc Welding