

Welding Fabrication

CHAIR: Grant VonLunen

CO-CHAIR:

CONTEST DATE: April 26, 2018

CONTEST LOCATION: Hutchinson Career Technical Education Academy – V110

CONTEST TIME: 7:30 am Check in – All Teams (see schedule in Contest Updates)

PURPOSE: To evaluate each contestant's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of welding fabrication.

ELIGIBILITY: (Team of three) Open to active SkillsUSA members enrolled in programs with welding as the occupational objective. This is a team event. Each team will be comprised of three student members from the same school and training program.

CLOTHING REQUIREMENT: Official SkillsUSA khaki work shirt (long sleeved) and pants (both the pants and shirt must be 100 percent cotton); black, brown or tan leather work shoes; and safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.) For State Competition, students may wear the Kansas State Official T-shirt and blue jeans, unless instructed differently from the contest chair. *(See contest chair updates below)*

Kansas State Official T-shirt



Official SkillsUSA attire



CONTEST UPDATES: For contest guidelines refer to the Technical Standards.

ATTENTION!!!!

- **STRICT ENFORCEMENT** OF PERSONAL PROTECTIVE EQUIPMENT (PPE) WILL BE OBSERVED DURING THE 2017 WELDING COMPETITION.
- ALL ISSUES CONCERNING INADEQUATE OR INAPPROPRIATE PPE MUST BE RESOLVED DURING THE ALLOWED CHECK-IN TIME FOR EACH STUDENT
- IF THE ISSUE CANNOT BE RESOLVED DURING THIS TIME PERIOD, THE STUDENT WILL NOT BE ALLOWED TO COMPETE.
- PLEASE REVIEW THE LIST OF PPE REQUIREMENTS FOR THIS WILL BE STRICTLY ENFORCED.

EACH TEAM WILL RECEIVE A SPECIFIC CHECK-IN TIME. THIS TIME SLOT WILL BE THE ONLY OPPORTUNITY FOR THE STUDENTS TO ENTER THE COMPETITION.

PLEASE REVIEW THE GUIDELINES PROVIDED BY SKILLSUSA CONCERNING THE DRESS CODE.

COMPLIANCE WITH THIS DRESS CODE WILL BE ASSESSED IN THE FINAL SCORE FOR EACH TEAM.

DENIM OR FRC PANTS WILL BE PERMITTED.

AWS SENSE WPS WILL BE USED FOR WELDING PARAMETERS. PLEASE REVIEW THESE DOCUMENTS WITH YOUR STUDENTS PRIOR TO THE WELDING COMPETITION.

SKILLS USA

Kansas

Each student will be expected to demonstrate the following processes:

*Students may be welding in the following positions

Process	Position
GTAW	2F, 3F, 1G, 2G
SMAW	2F, 3F, 4F, 1G, 2G
GMAW-S	2F, 3F, 4F, 1G, 2G

Potential Equipment for use:

Miller Syncrowave 200

Miller Syncrowave 180SD

Lincoln Powermig 350P

Miller 350P

Blueprint Reading

Layout Skills Tolerance will be $\pm 1/16$

General Knowledge

IMPORTANT:

There will be NO communication devices allowed after the student checks in. Simply put if you are caught, you are DISQUALIFIED.

Teachers or coaches will not have any contact with the competitors during the competition

DRESS CODE:

Skill Contest: Unless the contest chair says otherwise, students are required to wear the Official SkillsUSA Kansas T-shirt and blue jeans (no tears, holes, or bagginess) clean and neat with appropriate shoes for contest or Official SkillsUSA white polo shirt with black dress slacks, black socks and black leather shoes.

** Safety glasses with side shields or goggles. (Prescription glasses can be used only if they are equipped with side shields. If not, they must be covered with goggles.)*

SKILLS USA

Fab Contest

Torch Tips for Victor and Victor style Radnor Equipment

Oxy Start Up Guidelines

- Inspect Equipment
- Regulator adjust screw loose
- Crack cylinder valve slowly
- Oxy cylinder open till backseated
- Open torch valve or lever
- Set line pressure on regulator with adjusting screw

Fuel Gas Start Up Guidelines

- Inspect Equipment
- Regulator adjust screw loose
- Crack cylinder valve slowly
- Acetylene Cyl open $\frac{1}{2}$ to 1 full turn
- Open torch valve
- Set line pressure on regulator with adjusting screw

Shut Down Guidelines

- Close Cylinder valve
- Open torch valve or lever, bleed the line pressure
- Loosen adjusting screw

Fuel gas line pressure 10 PSI

OXY gas line pressure 30-40 PSI

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TOOLS/SAFETY LIST

***No communication devices are allowed in the competition area.
No contact by teachers or coaches during the competition.***

Each Contestant MUST have the following safety equipment:

Eye Protection
Hearing Protection
Welding Helmet with welding lens (quick change hoods are allowed)
Cutting Goggles/ face shield #5
Leather work shoes (no tennis shoes)
Leather Gloves (welding and tig gloves)
Leather or FR Coat or cape and bib

Allowable tools:

Spare welding lens
Lead pencil for written test
Soap Stone with holder or other metal marking pencil
Combo Square set
Steel measuring tape (standard and metric)
Fillet Weld Gauge
Ball Peen Hammer
Vice Grip Pliers (no more than 2)
Side Cutter Pliers (welpers, or Needle nose are allowed)
Chipping Hammer
Wire Brush
Stryker for cutting torch
Steel file for dressing cut edges
Compass
Chisel
Adjustable wrench
Center punch

All tools are to be placed into a bucket for our inspection, and only the tools above listed are approved for the contest. No copies of the Pre Test or outside notes are allowed. Each contestant will be given a set of Welding/Cutting prints and welding procedures before the start of the competition.

2018 KANSAS STATE CHAMPIONSHIPS (KSC) CONTEST UPDATE



Make sure to read the Technical Standards for further guidelines in preparing for the State competitions. Good luck!

Participating teams will be expected to make a plan during their print review with some idea of tasks, operation steps and assignments. The plan doesn't have to be strictly followed but students will need to be able to explain why adjustments were made.

The project will be a relatively simple welding cart, but will have an added fit up/accuracy component. It will require the use of some heating and bending as well as cuts and fit up in addition to the normal welding.

Tape measures will be used to check some measurements!

Welding Fabrication Schedule

7:30 AM	Check-In	All Teams	
7:45 AM	Orientation	All Teams	
8:00 AM	Written Test	All Teams	
8:30 AM	Classroom Tool Check-In	Group A	(Advisors Allowed)
8:45 AM	Blue Print Review/ Booth Assignment	Group A	(No Advisors)
9:00 AM	Welding Starts	Group A	
12:00 PM	Welding Stops/ Clean Area/Lunch	Group A	
12:30 PM	Contestants released through rear shop	Group A	
12:30 PM	Classroom Tool Check-In	Group B	(Advisors Allowed)
12:45 PM	Blue Print Review/ Booth Assignment	Group B	(No Advisors)
1:00 PM	Welding Begins	Group B	
4:00 PM	Welding ends/clean-up/Welders are Released	Group B	

****NOTE****

Advisors will be allowed to enter shop area from rear of shop after welding begins at 9AM and 1 PM.

2018 KANSAS STATE CHAMPIONSHIPS (KSC) CONTEST UPDATE



Group A

Dodge City Community College
Hutchinson Community College
North Central Kansas Technical College
Seward County Community College
Wichita Area Technical College
Eureka Jr./Sr. High School Washburn Tech

Group B

Hutchinson Career & Technical Ed Academy
Kansas City Kansas Community College
Meade High School
Paola High School
Parson High School
Washburn Institute of Technology