**NC SkillsUSA Welding Fabrication State Competition Update – 2024**

Each team will design a welding shop-related item using material that is readily available to them.

Teams will be required to brainstorm and design a project. **Prints for this project theme will be required this year.**

The project your team designs will be used in a welding lab/shop.  This project will be built at your team’s location and the build will be video recorded.  This will allow the fab team more time to complete the project than normal.  Contestants are allowed six hours to build the project and make the required welds and cuts.  Material prep-time will not count toward build time.

**Video Requirements:**

* Contestants must video the entire build.
* Video cannot be altered.
* Judges should not have any dispute as to who completed the project.
* Videos must be submitted online to [Contests@SkillsUSAnc.org](mailto:Contests@SkillsUSAnc.org) **no later than Thursday, April 12 midnight.**

**Minimum Project Requirements:**

* 4 Individual SMAW Welds of 3” or greater (One 3F vertical up welds required)
* 4 Individual GMAW Welds of 3” or greater (One 3F vertical up welds required)
* 4 Individual GTAW Welds of 3” or greater (One 3F vertical up welds required)
* 2 Individual OFC Cuts of 3” or greater

**Project Theme for Prints: (Team prints will be graded on this concept)**

* Shop accessory.  Anything that can be used in a Welding Lab.

**Guidelines for Design:**

* Designed for Welding Lab.
* Maximum width 48”, maximum length 48”, and maximum height 72”.
* Carbon steel material must be used to complete required welds and cuts.  Additional material will be accepted with no points awarded.
* **Projects need to be small enough to carry a long distance or have alternative means of mobility.** Example, casters, dolly or cart.

**Blueprint Requirements:**

* One set of prints on 11” x 17” paper printed in the Landscape mode (for grading)
* Title block in lower right-hand corner with space titled Team #.
* Max of 10 pages – You must have overall dimensions of the finished product included within the drawings you submit.
* All Welds MUST have appropriate weld symbols included to show where the required welds and weld processes will be used on the parts.
* All vertical welds shall be noted.
* A blueprint can be neatly hand drawn if the team does not have access to design software.
* An electronically scanned pdf copy is suggested for all prints.

**Items that must be supplied by Teams:**

* All Personal Protective Equipment
* 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
* Blueprints – See “Blueprint requirements”
* Résumé (for all contestants on a team).
* Teams must bring their own hand tools needed to complete the project.
* See Welding Fabrication National Standards for more information.

**Safety:**

* Face shields must be worn while grinding.
* Helmets or oxyacetylene goggles must be worn while cutting.
* Welding jackets must be worn while welding.
* Safety glasses must be worn at all times.
* Hearing protection must be worn at all times.
* Only one welding machine may be used at a time as there is only one piece of environmental equipment. Two grinders may be used in conjunction with the use of one welding machine.
* Grinding sparks on the welding equipment and/or other people will result in a point deduction.
* Environmental equipment must be always used when welding. Points will be deducted for improper use.

**Other Information:**

* Projects must be brought to the Greensboro Coliseum for judging, **April 24.**
* Interviews will be conducted randomly at the contest site, **April 24.**
* Teams that have the ability to bend or cut material with specialized equipment will not be awarded any additional points or be penalized.
* Points are awarded based on welds, blueprints, fabrication techniques.  (Make sure project is to size, square, level. Plumb, good fit-up and finish.)

**Ideas for Future Projects**

* If your team has a suggestion for a project that is worthy of being a regional project, please bring information with you to turn in with your prints.
* It’s encouraged to think of projects that can improve communities in some way or items that would be useful in the welding lab.
* This is not a requirement.
* Provide as much information as possible to describe the project.
* Label the information as “Suggestion for Future Projects.”
* 10 Bonus points will be awarded for submissions.
* No guarantees the project will be chosen.