

NTC Welding Contest - 2019

ENTRY DIVISIONS

Prizes will be awarded in two separate divisions – Utilitarian entries and Artistic entries.

Both types of entry must conform to the project parameters listed below.

Utilitarian projects serve a specific function. (can crusher, bench vise, grill, etc.)

Artistic projects have a purely aesthetic value. (abstract or representational sculpture, scale models, etc.)

PROJECT PARAMETERS

TEAMS

Participating teams may have a maximum of 6 members.

FABRICATION

Your project must include fillet welds and at least one groove weld.

Welding, cutting and forming processes may be manual, semi-automatic, or CNC.

SIZE

Your *assembled* project's overall footprint must be 12 cubic feet or smaller.

Your project may fit in 2' x 3' x 2' space, or a 1' x 2' x 6' space, or some other 12 cubic foot space.

FINISHING

Do not grind your finished welds or paint your project. Your welds must be visible so that the judges can evaluate them.

LABELING YOUR PROJECT

Use the *Welding Competition Entry Form* to create your project's label. Include the names of all participants, your school, and the title of your project. Your entry will be numbered when you arrive at NTC.

DOCUMENTING YOUR PROJECT

Document your project to show the steps you took from beginning to end. Steps might include: the original design idea, material order, actual work steps, problems encountered and your solutions, and finish work. Your documentation should include photos, drawings, and/or written descriptions, in a display board format.

PRESENTING YOUR PROJECT

When you arrive at NTC, you will set up your project and display board. Each team will then give a 2 to 3 minute presentation about its project. Presentation points may include the specific purpose or function of your project, the steps your team took to complete the project, the challenges your team encountered, and what you learned or accomplished in the process. The contest judges will be present for presentations, and judging will take place later in the morning.

JUDGING

Your project will be rated in the four categories below. See "Judging Criteria" for more details.

Category	Possible Points
Design	20
Display Board	5
Presentation	5
Weld Quality	20
TOTAL	50

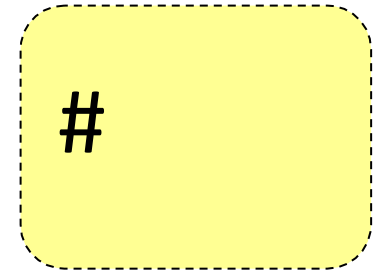
JUDGING CRITERIA

	Minimal	Basic	Accomplished	Exemplary
	Significant portion of criterion missing	Needs additional work, clarification	Effective, detailed, consistent	High level of insight, depth, quality, originality
DESIGN	5 – 9 points	10 – 14 points	15 - 19 points	20 points
Your design lends to the efficient function of your project (Utilitarian Entries) - or - Your design lends to the aesthetic impact of your project (Artistic Entries)				
Your process/tool choices are innovative and support your design intent				
Your material/technique choices are innovative and support your design intent				
DISPLAY BOARD	1 point	3 points	4 points	5 points
Your display board includes sketches/photos that show the evolution of your project				
Your display board details the processes, tool, and techniques used in your project				
Your display board is visually engaging				
PRESENTATION	1 point	3 points	4 points	5 points
You clearly explain the inspiration and intent behind your project				
You clearly describe the processes, tools, and techniques used in your project				
You reflect on challenges and lessons learned throughout the project				
WELD QUALITY	5 – 9 points	10 - 14 points	15 - 19 points	20 points
Weld Quality				
<i>*Ratings for weld quality:</i>	11 – 15 defects	6 – 10 defects	1 – 5 defects	No defects
<i>totals</i>				

JUDGING CRITERIA - WELDS

The following discontinuities will be considered defects for the purpose of this Contest		
Voids, Cracks & Inclusions	Undercut	Greater than 1/32" in depth, any length
	Porosity	Sum of diameters of holes equals 1/4" or more on entire project
	Cracks	Any
	Slag inclusions	Any
Size & Contour	Convexity or Concavity	3/32" or greater, any length in any location
	Unequal Leg (Filletts)	Greater than 1/16", any length in any location
	Appropriate Size (Filletts)	Leg size = thickness of thinner member
	Underfill (Groove Welds)	Greater than 1/32" in depth, any length
	Reinforcement (Groove Welds)	Greater than 1/8", any length
Finish	Lack of finish	Slag, wire stubs, or weld spatter in any amount

Welding Competition Entry Form



Project Title		
School		
Team Members		
Instructor		
Category <i>Please Circle one</i>	Utilitarian	Artistic