

Welding Technical Skill Scoring Rubric

	Developing 1 pts	Basic 2 pts	Proficient 3 pts	Advanced 4 pts
Safety	<p>Developing Personal protective equipment used intermittently. Use and selection of tools and equipment demonstrates need for further safety training.</p>	<p>Basic Personal protective equipment used correctly. Use and selection of tools and equipment demonstrates knowledge of safe procedures, but lacks implementation.</p>	<p>Proficient Tools and equipment are selected to fit the job and are used correctly and safely a majority of the time with no major safety infractions.</p>	<p>Advanced Tools and equipment are selected to fit the job; used correctly and safely 100% of the time. Pre-inspection of equipment completed. Personal conduct is professional and appropriate for the workplace.</p>
Cosmetic Appearance	<p>Developing Rough contours of weld puddles throughout the weld. Tie-in transitions are obvious and compromise the weld. Arc strikes are obvious. Slag and arc spatter dominate weld sample.</p>	<p>Basic Rough contours of weld puddles evident in over 1/2 the weld. Tie-in transitions are obvious, but do not compromise the weld. Arc strikes are visible, but do not hinder other beads. Some slag and arc spatter is present.</p>	<p>Proficient Smooth contours of weld puddles are evident in at least 75% of the weld. Tie-in transitions are noticeable, but do not compromise the quality of the weld. Minimal arc strikes are visible. Minimal slag and arc spatter.</p>	<p>Advanced Smooth contours of weld puddles are evident throughout the weld sample. Tie-in transitions are nearly undetectable. No arc strikes are visible. Sample is free of slag and spatter.</p>
Quality	<p>Developing Welds are too small, or too large, indicating incorrect amperage, travel speed, and arc length. Undercut is greater than 1/16". Reinforcement of beads is <1/3 or >1/2 of previous bead (when applicable).</p>	<p>Basic Weld size varies throughout sample, indicating erratic travel speed and inconsistent arc length. Undercut is greater than 1/16". Reinforcement of beads is <1/3 or >1/2 of previous bead (when applicable).</p>	<p>Proficient Welds are correct size on over 75% of the sample. Travel speed, amperage, and arc length are inconsistent, but not to the point of compromising integrity of the weld. Less than 1/16" of undercut. Reinforcement of beads is 1/3 - 1/2 of previous bead (when applicable).</p>	<p>Advanced Welds are correct size throughout the sample. Evidence is clear of correct travel speed, amperage, and arc length. Less than 1/32" of undercut. Reinforcement of beads is 1/3 - 1/2 of previous bead (when applicable).</p>
Base Metal Penetration	<p>Developing Minimal penetration of base metal. Weld shows signs of porosity and cracks throughout.</p>	<p>Basic Some evidence of penetration of base metal. Weld exhibits small amounts of porosity and/or cracks.</p>	<p>Proficient Fusion of base metal and penetration evident in more than 75% of weld sample. No cracks or porosity in the sample.</p>	<p>Advanced Fusion of base metal and penetration evident throughout entire weld sample. No cracks or porosity in the sample.</p>

Oxygen Fuel Cutting & PAC Technical Skills Assessment

	Developing 1 point	Basic 2 points	Proficient 3 points	Advanced 4 points
Safety	Proper use of PPE 90% of time. Assistance is needed with tools, equipment inspection, and set-up. Equipment is used properly majority of time with moderate workforce behavior issues.	Proper use of PPE 100% of time. Minor assistance is needed with tools or equipment inspection or set-up. Equipment is used properly. Minor workforce behavior issues.	Proper use of PPE 100% of time. Tools and equipment are inspected, set-up and used properly the majority of the time, with appropriate workplace behavior	Proper use of PPE 100% of time. Tools and equipment are inspected, set-up and used properly for the job, with appropriate workplace behavior
Top Edge Appearance	Uneven and out of square, roll over evident with slag and on surface	Uneven or out of square, roll over evident, slight amount of slag on surface	Relatively clean and square with top edge being slightly beaded or roll over. Slight amount of scale	Clean and square with no roll over. Slight amount of scale that is easily removed from top of plate
Bottom Edge Appearance	Uneven and rough, considerable amount of slag forming along bottom surface.	Uneven or rough, moderate amount of slag forming along bottom surface.	Relatively clean and square with slight slag forming on bottom surface	Clean and square with no slag forming on bottom surface
Cut Quality	Irregular cut with grooves or deep drag lines Cut may contain pressure marks. Cut lacks straightness	Moderately irregular cut with moderate grooves. Cut is fairly straight.	Relatively smooth with drag lines incline backwards, Relatively straight and even cut.	Relatively smooth surface with slightly sloping drag lines. Straight and even cut.