

# Advance Buffalo—Welding Skill Levels

Level I	Level II	Level III	Level IV
<ul style="list-style-type: none"> <li>Effective under supervision – “Can stick two pieces of metal together”</li> </ul>	<ul style="list-style-type: none"> <li>Minimal supervision – “Can tell the welder what to do and it gets done”</li> </ul>	<ul style="list-style-type: none"> <li>No supervision; possible mentoring of others; mastery of employer specific skills</li> </ul>	<ul style="list-style-type: none"> <li>Full autonomy; capable of lead role; possesses specialized skills</li> </ul>
<b>Process</b> <ul style="list-style-type: none"> <li>MIG, FCAW, stick</li> </ul>	<b>Process</b> <ul style="list-style-type: none"> <li>TIG, Sub-arc (plus Level 1)</li> </ul>	<b>Process</b> <ul style="list-style-type: none"> <li>X-ray (plus Level 1-2)</li> </ul>	<b>Process</b> <ul style="list-style-type: none"> <li>Full body of knowledge</li> </ul>
<b>Positions</b> <ul style="list-style-type: none"> <li>Orientation and basic positions</li> </ul>	<b>Positions</b> <ul style="list-style-type: none"> <li>Positions 1-3; Flat board, horizontal, overhead</li> </ul>	<b>Positions</b> <ul style="list-style-type: none"> <li>Mastery of all positions (1-6)</li> </ul>	<b>Positions</b> <ul style="list-style-type: none"> <li>Full body of knowledge</li> </ul>
<b>Materials</b> <ul style="list-style-type: none"> <li>Knowledge of basic materials</li> </ul>	<b>Materials</b> <ul style="list-style-type: none"> <li>Mastery of basic materials</li> </ul>	<b>Materials</b> <ul style="list-style-type: none"> <li>Alloys, exotics; trainable on all materials</li> </ul>	<b>Materials</b> <ul style="list-style-type: none"> <li>Full body of knowledge</li> </ul>
<b>Tests/Certifications</b> <ul style="list-style-type: none"> <li>None</li> </ul>	<b>Tests/Certifications</b> <ul style="list-style-type: none"> <li>AWS, ASME, Bend test, Leak test</li> </ul>	<b>Tests/Certifications</b> <ul style="list-style-type: none"> <li>Can pass any certification – AWS, ASME, PED, NQA</li> </ul>	<b>Tests/Certifications</b> <ul style="list-style-type: none"> <li>Can pass any certification</li> </ul>
<b>Key success factors</b> <ul style="list-style-type: none"> <li>Machine set-up, metal prep.</li> <li>Appearance – polishing/finishing/grinding</li> <li>Material handling – jib crane &amp; forklift skills</li> <li>Safety awareness</li> <li>Mechanical aptitude</li> <li>Math skills – geometry</li> <li>Blueprint reading exposure; basic ability to read and understand procedures</li> <li>Drug free</li> <li>Verbal comm. (English)</li> </ul>	<b>Key success factors</b> <ul style="list-style-type: none"> <li>Enhanced cosmetics/aesthetics</li> <li>Knows weld symbols</li> <li>Dye check</li> <li>Fabrication/fitting (beginning)</li> <li>Can run one piece of equipment (e.g., Miller, Lincoln)</li> <li>Understands metallurgy</li> </ul>	<b>Key success factors</b> <ul style="list-style-type: none"> <li>Higher-level cosmetics/aesthetics</li> <li>Fabrication/fitting</li> <li>Produces documentation</li> <li>Provide feedback to Engineering Dept.</li> <li>Fluent in reading drawings</li> <li>Strong vessel and pipe work</li> </ul>	<b>Key success factors</b> <ul style="list-style-type: none"> <li>Trainer role</li> <li>Inspection (possible CWI)</li> <li>Possible business-side responsibilities</li> <li>&lt;1% re-weld rate (x-ray)</li> </ul>

