

1. Title	Perform thick plate (above 16mmor) welding
2. Code	EMPERM406A
3. Range	Perform thick plate (above 16mmor) welding in general industrial plants, power plants or other places.
4. Level	4
5. Credits	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of thick plate welding</p> <ul style="list-style-type: none"> <li>◆ Understand the content of process drawings and assembly drawings</li> <li>◆ Master welding process, including: <ul style="list-style-type: none"> <li>• Safety knowledge including safe working procedures, protective measures and emergency procedures</li> <li>• Welding process for different base materials</li> <li>• Groove preparation</li> <li>• Heat treatment procedures</li> <li>• Standards for welding procedures and testing after welding</li> </ul> </li> <li>◆ Master basic technical requirements on thick plate welding</li> </ul> <p>6.2 Methods and procedures for thick plate welding</p> <ul style="list-style-type: none"> <li>◆ Perform thick plate welding effectively, including: <ul style="list-style-type: none"> <li>• Groove preparation</li> <li>• Working on welds at different angles</li> <li>• Ensuring that the welds are smooth and firm</li> <li>• Perform pre-heat and post weld heat treatment properly for different base materials to avoid distortion and burst of weld joints</li> <li>• Make simple welding fixture according to actual welding environment</li> </ul> </li> </ul> <p>6.3 Professionalism in thick plate welding</p> <ul style="list-style-type: none"> <li>◆ Follow professional requirements of the industry to perform welding on thick plates in order to pass the radiation photography, uultrasonic testing, radiographic testing or magnetic particle inspection</li> </ul>
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to perform welding on thick plates that pass the mechanical and safety tests; and</p> <p>(ii) Capable to compile thick plate welding report.</p>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses the competency of EMCUIN320A “Perform weld joint edge production and assembly according to drawing”, EMCUIN321A” “Perform manual arc welding (MMAW) / shielded metal arc welding (SMAW) on different kinds of steel according to drawings”, EMCUIN322A “Perform metal inert gas (MIG) / gas metal arc welding (GMAW) according to drawings” and EMCUIN324A “Perform tungsten inert gas (TIG) / gas tungsten arc welding (GTAW) according to drawings”.</p>