

1. Title	Heat treatment operations of steel
2. Code	EMSRRM313A
3. Range	Implement procedures of heat treatment of steel in daily tasks of ship repair.
4. Level	3
5. Credit	3
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Basic theory of heating and its application to steel</p> <ul style="list-style-type: none"> ◆ Understand the physical effect of heating on steel and its range of application based on the knowledge of the relation diagram of iron and carbon <ul style="list-style-type: none"> • Toughening effect • Normalization effect • Hardening effect • Heat treatment (such as soldering) <p>6.2 Heat treatment method and procedures for steel</p> <ul style="list-style-type: none"> ◆ Heat treatment of steel (such as quenching, normalizing, tempering, annealing) ◆ Implement bathing or blowing working procedures systematically in the hardening process of heat treatment <p>6.3 Professional knowledge of heat treatment</p> <ul style="list-style-type: none"> ◆ Know about the basics and range of application of steel materials ◆ Assist in and make preparations for the welding procedure ◆ Be familiar with the heating process and necessary procedures
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to implement heat treatment procedures for steel; and</p> <p>(ii) Capable to apply the professional knowledge of heat treatment.</p>
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of physics.