

1. Title	Install and repair low or medium pressure valves	
2. Code	EMSRIN207A	
3. Range	Implement installation and repairs of general low or medium pressure (below 30bar) valves at shipyards, workshops, on board or at other workplaces. The competencies in this unit do not include the welding procedure.	
4. Level	2	
5. Credit	5	
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Content and illustration methods of pipe and valves' assembly drawings</p> <ul style="list-style-type: none"> ◆ Understand the content and illustration methods of pipe and valves' parts drawings and assembly drawings ◆ Understand pipe and valve system expansion plans ◆ Understand pipe and valve system plan, the content and illustration methods for installation of piping systems ◆ Understand the illustration methods of pipe accessories in piping system plans ◆ Understand the overall arrangement of marine pipe and valve system ◆ Understand the overall arrangement of the pipe and valve system of ship boiler system <p>6.2 Install and inspect general valves and select appropriate materials for installation and repairs</p> <ul style="list-style-type: none"> ◆ Disassemble, install and repair general valves according to the standards ◆ Grinding and testing of valve disc and seat, implement valve core and base grinding and testing ◆ Use angle grinders and various types of grinding tools for valve discs and seats ◆ Select and use appropriate grinding materials to adjust the valves ◆ Adjust and repair the valve stroke and torque ◆ Adjust and test steam water system safety valves ◆ Select appropriate ship hardware such as appropriate types and specifications for fastenings ◆ Select appropriate fillers, sealing, metal gaskets and non-metal gaskets ◆ Select appropriate detergents, coatings, grinding materials ◆ Select appropriate seal rings, safety valve seal rings, springs and orifice plates ◆ Select appropriate thermal insulation materials and lubricating materials to wrap and seal valves 	

	<p>6.3 Professionalism in repairing general ship valve equipment and systems</p> <ul style="list-style-type: none"> ◆ Follow the law and the code of practice to implement the following work processes: <ul style="list-style-type: none"> • Identifying the causes, and hazards of water hammer and the ways to prevent it from happening • Eliminating common faults in pressure pipe valve systems • Identifying common faults with valve bodies, stems, bonnets and methods of repairing them • Identifying common faults and defects with ship pipes and valves and their causes <ul style="list-style-type: none"> › Elimination of valve flange, joint head blowholes or cracks › Defects with valve seals and their treatment › Defects with valve structures and their treatment › Elimination of safety valve malfunctions
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> (i) Capable to systematically install and repair ship valves; and (ii) Capable to make correct and detail reports on repaired items.
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses general benchfitting techniques.</p>