

1. Title	Inspect, repair and install general piping
2. Code	EMSRIN304A
3. Range	Inspect, repair and install general low or medium pressure pipes on board, at repair workshops or at related work sites of dockyards.
4. Level	3
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Characteristics of common piping materials and common tools for working on pipes, and working principles of pipe drawings</p> <ul style="list-style-type: none"> ◆ Understand the characteristics and materials commonly used for installation, inspection and repair of pipes, including: <ul style="list-style-type: none"> • Types of pipes • Types of flanges • Bends and tees • Hardware parts • Joint accessories • Filler materials • Bedding and coating materials • Heat insulation materials ◆ Know how to use piping tools and instruments including: <ul style="list-style-type: none"> • Pumps for water pressure test pump and pressure gauge • Grove machine • Pipe-bending machine • Grinding machine, cutting machine • Level gauge ◆ Know how to read and understand mechanical drawings of general equipment <ul style="list-style-type: none"> • Structural drawings • Sketches for machining parts • Piping layouts • Pipelines stereogram • System drawings • Common parts drawings • Assembly drawings • Know the meanings of symbols on the drawings, including tolerance match, surface finish and geometrical tolerance

	<p>6.2 Procedures and requirements for installing, inspecting and repairing low or medium pressure pipe system</p> <ul style="list-style-type: none"> ◆ Know how to inspect, repair and install low or medium pressure (below 30 bar) pipes, including: <ul style="list-style-type: none"> • Formulating procedures and requirements within the scope of work • Producing low pressure pipes including: straight pipes, winding pipes, straight tees, all kinds of pipe accessories and supporting and hanging units • Estimating the material requirements for laying low pressure pipes ◆ Know all aspects of pipe installation, inspection and repair within the scope of work, including the system's: <ul style="list-style-type: none"> • Hydraulic test • Flushing and dirt removal • Washing • Acid cleaning • Passivation <p>6.3 Professionalism in repairing low or medium pressure pipes</p> <ul style="list-style-type: none"> ◆ Follow the requirements of drawings to carry out piping installation, inspection and repair ◆ Follow the engineering requirements to control the installation progress, ensuring that the installation meets the engineering requirements and quality standard ◆ Understand safety guidelines as required by the law, code of practice and supplier's installation and repair guidelines to carry out pipe work installation, inspection and repair
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> (i) Capable to install, inspect and repair low or medium pressure pipe systems; (ii) Capable to correctly arrange and install measuring instruments to correctly measure, record data and adjust various axial alignment to required standard; and (iii) Capable to compile installation and examination reports and clearly describe the operational status of various types of pipe systems.
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses basic techniques of installing, disassembling and repairing pipes.</p>