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| 1. Title | Basic maintenance of marine electrical installation | |
| 2. Code | EMSRRM103A | |
| 3. Range | Apply elementary knowledge of basic operation of marine electrical installation to assist in repairs of circuits and electrical equipment and implement tasks of an electrical trainee in general shipyards when handling routines related to marine electrical repairs. | |
| 4. Level | 1 | |
| 5. Credit | 5 | |
| 6. Competency | <p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Construction and working principles of common marine electrical equipment</p> <ul style="list-style-type: none"> ◆ Know about the basic construction and principles of marine electrical equipment, including: <ul style="list-style-type: none"> • Single-phase and three-phase current lines, earthing, insulating and conductive materials, switches, fuses, circuit breakers and insulators • Motors, AC generators, transformers and starters • Circuit diagrams, symbols and specifications • Simple calculations and use of formulas ◆ Know about the basic principles and correct operating methods of common repair tools for electrical equipment in dockyards and repair workshops ◆ Understand the functions, uses and operation steps of general repair tools for circuits and electrical equipment ◆ Possess basic knowledge of the use of power tools and testing equipment (such as testing tools) in order to carry out simple circuit and electrical repairs <p>6.2 Methods of repairing marine electrical equipment and systems</p> <ul style="list-style-type: none"> ◆ Read and understand simple electrical specifications, circuit diagrams and power supply diagrams for use in maintenance work ◆ Assist in installing, testing, maintaining and repairing electrical systems such as lighting, control, air conditioning, ventilation and power supply systems <p>6.3 Professionalism in repairing marine electrical equipment and systems</p> <ul style="list-style-type: none"> ◆ Correctly select and operate equipment and materials necessary for the repair, maintain the repairing tools and testing equipment in good condition and assist in storing the materials correctly ◆ Understand and follow basic measures for personal and environmental protection when performing repairs ◆ Follow instructions to independently carry out maintenance and simple repairs of electrical equipment ◆ Follow the safety codes of practice at work to implement urgent tasks under supervision | |

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| 7. Assessment Criteria | <p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"><li data-bbox="395 304 1474 376">(i) Capable to assist in the maintenance and repairs of marine circuits and electrical equipment; and<li data-bbox="395 405 1474 477">(ii) Capable to correctly select and use appropriate instruments to carry out relevant work, and follow instructions to assist in repairing marine electrical equipment and system accessories. |
| 8. Remarks | <p>The credit value of this unit of competency is set on the presumption that the person already possesses basic electrical and mechanical knowledge.</p> |