

1. Title	Test propulsion devices	
2. Code	EMSRT306A	
3. Range	In repairs, inspection, commissioning and testing of general ship propulsion devices, assist in planning test arrangements and implementing stationary tests and sea trials (if applicable), and use the test results for analysis.	
4. Level	3	
5. Credit	3	
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of testing propulsion devices</p> <ul style="list-style-type: none"> ◆ Master the performance indicators and cycle of testing general ship propulsion devices, as well as normal procedures and performance criteria for testing, such as: <ul style="list-style-type: none"> • Physical parameters (including: speed/turning speed, temperature, pressure, vibration and power) • Other parameters (such as fuel consumption and emission levels) ◆ Be familiar with the sensing and transmission mode of monitoring and alarm signals of general propulsion devices system ◆ Master the operating principles of physical and chemical quantitative conversion instruments and message transmission system ◆ Master basic regulation concept and the operating principles of open and closed loop regulation systems <p>6.2 Methods and procedures of testing propulsion devices</p> <ul style="list-style-type: none"> ◆ Systematically implement tests on general propulsion devices e.g. fixed test and tolerance alignment ◆ Know how to illustrate all processes of the system operation of propulsion devices with block diagrams ◆ Interpret display signals for the monitoring and alarm of propulsion devices system, and understand and integrate the messages ◆ Master the regulation techniques, and process and integrate the regulated data according to the inter-relationship of input and output items ◆ Appropriately coordinate the functions of individual propulsion devices and the performance of its associated system after testing 	

	<p>6.3 Professionalism in testing propulsion devices</p> <ul style="list-style-type: none"> ◆ Follow user manuals of general propulsion devices and make use of the knowledge and experience of test indicators for the units to judge the fixed test or sea trial arrangements required ◆ Implement test or sea trial procedures and collect and analyze test data ◆ Record the setting point of each test or sea trial item, and maintain effective monitoring and alarm required after regulation ◆ Assist in planning test or sea trial arrangements
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to correctly implement test procedures for general propulsion devices, use testing tools and equipment, record and process data, and use the data to demonstrate the test results; and</p> <p>(ii) Capable to assist in analyzing the production capacity and overall functional performance of a propulsion unit based on data resulted from the fixed test or sea trial (if applicable) e.g. speed, fuel consumption, emission and other parameters of the ship as well as basic ship resistance data.</p>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of inspection, commissioning and testing.</p>