1. Title	Test the physical strength of materials
2. Code	EMSRIT201A
3. Range	For general inspection, commissioning and testing works related to ship repairs and mechanical engineering, test the physical strength of materials in order to assess whether the materials meet the specified requirements.
4. Level	2
5. Credit	3
6. Competency	Performance Requirements 6.1 Knowledge of testing the physical strength of materials ♦ Know about the physical strength of all kinds of materials and its importance to engineering structure, such as: • Basic relationship of hardness and tensile stress • Tensile strength, bending stress, broken surface shrinkage, extension rate • flexibility, plasticity, forgeability and toughness 6.2 Techniques and procedures of testing the physical strength of materials ♦ Effectively use testing instruments to test the physical strength of materials ♦ Use the test results to draw related graphs（such as tensile strength test graph） 6.3 Professionalism in testing the physical strength of materials ♦ Assess the test results according to the technical specifications of the materials to see whether the meet the test requirements ♦ Use data of the materials to classify the properties and strength of the materials
7. Assessment Criteria	The integrated outcome requirements of this unit of competency are: (i) Capable to correctly implement tests of the physical strength of general materials ; and (ii) Capable to use data obtained from the test to clearly illustrate the test results.
8. Remarks	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.