

1. Title	Inspect, test and commission the air-conditioning system equipment of trains
2. Code	EMRAIT405A
3. Range	Perform visual inspection, insulation and function tests, and measure, adjust and set the train air-conditioning systems and controlling and protecting devices for train installation work according to guidelines and standards for inspection, testing and commissioning.
4. Level	4
5. Credits	4
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Working principles of and standards for inspecting, testing and commissioning the air-conditioning system equipment of trains</p> <ul style="list-style-type: none"> ◆ Understand the structure and working principles of the air-conditioning system equipment of trains, including: <ul style="list-style-type: none"> • Air-conditioner • Air duct • Train air-conditioning control device • Train air-conditioning protecting device ◆ Understand the scope and standards for inspection, testing and commissioning of the air-conditioning system equipment of trains <p>6.2 Methods and procedures of inspecting, testing and commissioning the air-conditioning system equipment of trains</p> <ul style="list-style-type: none"> ◆ Able to read the inspection, testing and commissioning guidelines and select useful information ◆ Calculate and compile the details for testing and commissioning according to relevant information ◆ Inspect, test and commission the air-conditioning system equipment of trains, and controlling and protecting devices according to guidelines and standards ◆ Conduct air leak test for the air duct system ◆ Measure and record the overall operating parameters of the air-conditioning system of train, including the temperature, humidity, air velocity and volume, pressure and noise level at all measuring points ◆ Analyze the performance of air-conditioners according to guidelines and standards ◆ Perform leak checking, with electronic leak detector and halogen lamp, etc., for air-conditioning and refrigeration system ◆ Use general electrical and mechanical and air-conditioning equipment repairing and testing instruments and tools efficiently

	<p>6.3 Professionalism in inspecting, testing and commissioning the air-conditioning system equipment of trains</p> <ul style="list-style-type: none"> ◆ Inspect, test and commission the air-conditioning system equipment of trains according to the standards and requirements for work safety, health, environmental protection and quality management of railway works ◆ Understand the safety guidelines as required by the law and codes of practice in inspecting, testing and commissioning the air-conditioning system equipment of trains
<p>7. Assessment Criteria</p>	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> (i) Capable to inspect and test efficiently the air-conditioners and air ducts of trains according to guidelines and standards; (ii) Capable to inspect and test efficiently the functions and settings of the air-conditioning control system and protection system according to guidelines and standards; (iii) Capable to measure and record efficiently the overall operating parameters of the air-conditioning system, including the electric current, temperature, humidity, air velocity, pressure and noise; and (iv) Capable to use electronic leak detector, halogen lamp and soap solution to perform leak checking for the air-conditioning and refrigeration system efficiently.
<p>8. Remarks</p>	<p>The credit value of this unit of competency is set on the presumption that the person already possesses knowledge of air-conditioning equipment and control circuit.</p>