

1. Title	Formulate the inspection, commissioning and testing guidelines and standards for the train air-conditioning systems	
2. Code	EMRAIT504A	
3. Range	Refer to the design of the train air-conditioning systems and the inspection and testing guidelines of manufacturers and undertake site inspection, measurement and tests of the equipment so as to formulate the inspection, commissioning and testing guidelines and standards for the train air-conditioning system and equipment.	
4. Level	4	
5. Credits	9	
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Design, working principles and standards of the air-conditioning system equipment of trains</p> <ul style="list-style-type: none"> <li>◆ Understand the design, structure and working principles of the air-conditioning equipment of trains</li> <li>◆ Know about the application of the inspection and testing guidelines of manufacturers</li> <li>◆ Master the techniques of working out the inspection, commissioning and testing standards for the air-conditioning system equipment of trains</li> <li>◆ Understand the application of typical air-conditioning equipment measuring and testing instruments and tools</li> <li>◆ Be familiar with the treatment and legal requirements on refrigerant of air-conditioning system</li> </ul> <p>6.2 Methods and procedures of formulating the inspection, commissioning and testing guidelines for the air-conditioning system equipment of trains</p> <ul style="list-style-type: none"> <li>◆ Refer to the design of the air-conditioners and air ducts of trains and the inspection and testing guidelines of manufacturers and undertake site inspection, measurement and testing of the equipment and draft the inspection, commissioning and testing guidelines and standards for the air-conditioners and air ducts of trains. Aspects to be covered are: <ul style="list-style-type: none"> <li>• Inspection procedures and standards</li> <li>• Measurement of operating data of air-conditioners (including insulation and function tests)</li> <li>• Inspection procedures and standards (including insulation, continuity and function tests)</li> <li>• Procedures and standards of equipment setting</li> <li>• Important points for inspection, testing and setting the equipment</li> </ul> </li> <li>◆ Test the drafted inspection, commissioning and testing guidelines and standards</li> </ul>	

	<ul style="list-style-type: none"> <li>◆ Analyze data and modify and formulate the inspection, commissioning and testing guidelines and standards for the air-conditioners and air ducts of trains</li> <li>◆ Draft, test and formulate the inspection, commissioning and testing guidelines and standards for the air-conditioning circuit control system and equipment of trains</li> <li>◆ Draft, test and formulate the inspection, commissioning and testing guidelines and standards for the air-conditioning circuit protection system and equipment of trains</li> <li>◆ Compile, test, analyze data and formulate guidelines and standards for measuring the overall operating parameters of the train air-conditioning systems, including the temperature, humidity, air velocity, pressure and noise level</li> </ul> <p>6.3 Professionalism in formulating the inspection, commissioning and testing guidelines for the air-conditioning system equipment of trains</p> <ul style="list-style-type: none"> <li>◆ Formulate the inspection, commissioning and testing guidelines for 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</li> <li>◆ Understand the safety guidelines as required by the law and codes of practice in formulating the inspection, commissioning and testing guidelines for the train air-conditioning systems</li> </ul>
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to draft a set of inspection, commissioning and testing guidelines and standards for the train air-conditioning systems according to commissioning requirements; and</p> <p>(ii) Capable to formulate guidelines and standards for measuring the overall operating parameters of the train air-conditioning systems; analyze data and conduct reviews and modifications efficiently.</p>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses professional knowledge of air-conditioning system and equipment.</p>