

1. Title	Perform insulation tests, pressure tests and overall system commissioning tests for the railway overhead feeder system
2. Code	EMRAIT508A
3. Range	Perform overall system commissioning tests for the railway overhead feeder system, including insulation tests, pressure tests, earth impedance tests and drop-short tests, and undertake function tests and interlocking tests for the control and protection system.
4. Level	5
5. Credits	9
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Principles and standards for commissioning tests for the railway overhead feeder system</p> <ul style="list-style-type: none"> <li>◆ Be familiar with the uses, methods and standards of commissioning tests for the railway overhead feeder system</li> <li>◆ Master the techniques of applying various types of testing instruments</li> </ul> <p>6.2 Methods and procedures of performing insulation tests, pressure tests and overall system commissioning tests for the railway overhead feeder system</p> <ul style="list-style-type: none"> <li>◆ Undertake insulation tests and pressure tests for the main circuit of the overhead wire according to testing standards</li> <li>◆ Measure and record the data from tests</li> <li>◆ Undertake insulation tests, pressure tests, earth impedance tests and drop-short tests for the main circuit of the overall railway overhead feeder system according to testing standards</li> <li>◆ Undertake load tests and full-load tests according to testing standards</li> <li>◆ Measure and record the data from tests, including the data of electricity quality</li> <li>◆ Undertake function tests, interlocking tests and control logic tests for the control and protection devices of the power supply system of trains, including control and protection relays and circuits, PLC devices and SCADA devices, according to circuit configuration, and control and protection logic</li> <li>◆ Analyze the data from railway overhead feeder system tests and assess whether the system complies with commissioning standards</li> </ul> <p>6.3 Professionalism in performing commissioning tests for the railway overhead feeder system</p> <ul style="list-style-type: none"> <li>◆ Understand the safety measures for performing commissioning tests for the railway overhead feeder system</li> <li>◆ Understand the safety guidelines as required by the law and codes of practice in handling the commissioning tests for the railway overhead feeder system</li> </ul>

7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> <li>(i) Capable to draft the procedures and standards of the overall system tests for the main circuit of the railway overhead feeder system; and</li> <li>(ii) Capable to calculate and analyze the measurements from tests efficiently and assess whether the feeder system complies with commissioning standards.</li> </ul>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses expertise in power supply system and equipment.</p>