

1. Title	Verify the design of diesel locomotive engines and generators and perform design reviews
2. Code	EMRADE504A
3. Range	Apply the professional knowledge and techniques of diesel engine and generator engineering to verify the design of diesel locomotive engines and generators and perform design reviews according to the design requirements and in coordination with the overall diesel locomotive traction control design.
4. Level	5
5. Credits	9
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Design requirements for diesel locomotive engines and generators to match with the overall train design</p> <ul style="list-style-type: none"> <li>◆ Understand the design requirements for diesel locomotive engines and generators and master the key points.</li> <li>◆ Master the key points of the overall diesel locomotive design and the techniques of matching the design of diesel locomotive engines and generators with the overall locomotive design</li> </ul> <p>6.2 Methods and procedures of verifying the design of diesel locomotive engines and generators and performing design reviews</p> <ul style="list-style-type: none"> <li>◆ Verify the design of the diesel locomotive engine according to the design requirements for horsepower output and size limit of the engine</li> <li>◆ Verify the design of the diesel locomotive engine matching with the generator</li> <li>◆ Verify the design of the diesel locomotive engine according to the overall design requirements for loading capacity, speed and acceleration rate of the diesel locomotive</li> <li>◆ Verify the design of the generator according to its power output specifications</li> <li>◆ Verify the design of the generator matching with the diesel locomotive engines and generators</li> <li>◆ Verify the design of the generator according to the overall design requirements for loading capacity, speed, acceleration rate and traction control of the diesel locomotive</li> <li>◆ Review comprehensively the design of diesel locomotive engines and generators according to the requirements for the overall train design</li> <li>◆ Consider the safety, reliability, comfort, environmental protection and efficiency of the diesel locomotive during design review</li> </ul>

	<p>6.3 Professionalism in verifying and reviewing the design of diesel locomotive engines and generators</p> <ul style="list-style-type: none"> <li>◆ Verify the design of diesel locomotive engines and generators and perform design reviews 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 verifying and reviewing the design of diesel locomotive engines and generators</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 verify the design of diesel locomotive engines efficiently according to relevant design standards;</li> <li>(ii) Capable to verify the design of diesel locomotive generators efficiently according to relevant design standards; and</li> <li>(iii) Capable to review the design of diesel locomotive engines and generators efficiently according to the standards complying with the overall diesel locomotive design.</li> </ul>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses professional knowledge of diesel engines and generators.</p>