

1. Title	Examine and assess LPG cylinders / tanks / vaporizers / gas mains	
2. Code	EMGAGS501A	
3. Range	Test and examine LPG cylinders/tanks/vaporizers/gas mains in the LPG central gas supply system and LPG compounds to assess whether they are suitable for further use.	
4. Level	5	
5. Credits	7	
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge and principles of examining and assessing LPG cylinders / tanks / vaporizers / gas mains</p> <ul style="list-style-type: none"> <li>◆ Point out the design pressure of LPG cylinders / tanks / vaporizers / gas mains</li> <li>◆ Point out the rated test pressure of LPG cylinders / tanks / vaporizers / gas mains LPG</li> <li>◆ Compare the effects of the compression ratio of air with that of water on the examination</li> <li>◆ Compare the effects of the thermal expansion rate of air with that of water on the examination</li> <li>◆ Compare the advantages and disadvantages of using air and water as media of examination</li> </ul> <p>6.2 Methods and procedures of examining and assessing LPG cylinders / tanks / vaporizers / gas mains</p> <ul style="list-style-type: none"> <li>◆ Perform coat cracking test and confirm the test result if it meets the requirements</li> <li>◆ Perform magnetic particle test and confirm the test result if it meets the requirements</li> <li>◆ Monitor the hydraulic test and confirm the test result if it meets the requirements</li> <li>◆ Perform ultrasonic test on wall thickness and confirm the test result if it meets the requirements</li> <li>◆ Perform ultrasonic test on paint thickness and confirm the test result if it meets the requirements</li> <li>◆ Perform inner surface examination for manholes and confirm the examination result if it meets the requirements</li> </ul>	

	<p>6.3 Professional knowledge and responsibilities for examining and assessing LPG cylinders / tanks / vaporizers / gas mains</p>	<ul style="list-style-type: none"> <li>◆ Perform inner / outer surface corrosion and damage examination on LPG tanks and confirm the examination result if it meets the requirements</li> <li>◆ Monitor the LPG tank support and weld joint examination and confirm the test result if it meets the requirements</li> <li>◆ Use the technical information on engineering materials provided by the LPG cylinder / tank / vaporizer / gas main manufacturer for assessment</li> <li>◆ Illustrate or list the major materials for making LPG cylinders / tanks / vaporizers / gas mains and their properties</li> <li>◆ Apply design parameters and testing standards for LPG tanks and relevant standards</li> <li>◆ Apply the NFPA58, <b>【Standard for the storage and handling of liquefied petroleum gases】</b></li> <li>◆ Apply the British Standard and relevant standards of other countries</li> <li>◆ Apply the standards in the Code of Practice for Hong Kong LPG Industry: Module 1 [LPG Compounds and Cylinder Stores] in performing examination and assessment</li> <li>◆ Apply the standards in the Code of Practice for Hong Kong LPG Industry: Module 2 [Underground LPG Pipework] in performing examination and assessment</li> <li>◆ Apply the <b>【Guideline for Revalidation of LPG Fuel Tanks for LPG Vehicles】</b> issued by the Electrical and Mechanical Services Department</li> <li>◆ Apply other relevant standards, codes of practice and legislations in performing examination and assessment</li> </ul>
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7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to test and examine LPG cylinders/tanks/vaporizers/gas mains in the LPG central gas supply system and LPG compounds to assess whether they are suitable for further use.</p>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses the competency of EMGADE101A <b>【Basic knowledge of gas application】</b> .</p>