

1. Title	Apply the knowledge of refrigeration system of cold storage
2. Code	EMACDE305A
3. Range	Apply the knowledge of refrigeration system of cold storage, at design studios or cold storage in the design, installation, commissioning, operation, repair and maintenance of cold storages.
4. Level	3
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of refrigeration system of cold storage</p> <ul style="list-style-type: none"> <li>◆ Understand the functions, types, characteristics and working principles of different types of refrigerant supply systems, including being able to illustrate: <ul style="list-style-type: none"> <li>• Characteristics and working principles of direct-expansion refrigerant supply system</li> <li>• Characteristics and working principles of gravity type refrigerant supply system</li> <li>• Characteristics and working principles of liquid-pump refrigerant supply system</li> </ul> </li> <li>◆ Understand the functions and working principles of different types of compression refrigeration system and installation requirements on major components, including: <ul style="list-style-type: none"> <li>• Freon system</li> <li>• Ammonia system</li> <li>• Cascaded system</li> </ul> </li> <li>◆ Understand the function, construction and working principles of various types of condensing system of refrigeration systems, including: <ul style="list-style-type: none"> <li>• Condensing system of Freon system</li> <li>• Condensing system of ammonia system</li> <li>• Condensing system of Cascaded system</li> </ul> </li> <li>◆ Understand the function, construction, working principles and characteristics of various types of special freezing equipment for cold storage</li> <li>◆ Understand the advantages and disadvantages of centralized refrigeration system and distributed refrigeration system</li> <li>◆ Understand the concept, advantages and working principles of air-cooled cold storage</li> </ul>

	<ul style="list-style-type: none"> <li>◆ Understand the construction of major components of air-cooled cold storage</li> <li>◆ Understand the working principles of different ice making methods</li> <li>◆ Understand the functions and construction of typical ice making equipment</li> <li>◆ Understand the installation and insulation requirements on refrigeration equipment and pipings for cold storages</li> <li>◆ Understand the procedures of flushing, vacuuming, refrigerant charging and leak checking for the refrigeration system of cold storage , including: <ul style="list-style-type: none"> <li>• Freon system</li> <li>• Ammonia system</li> </ul> </li> </ul> <p>6.2 Application of knowledge of refrigeration system of cold storage</p> <ul style="list-style-type: none"> <li>◆ Apply the knowledge of the refrigeration system of cold storage to solve problems involved in the design, installation, commissioning, operation, repair and maintenance of cold storage; communicate with the sector and clients</li> </ul>
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to apply the knowledge of the refrigeration system of cold storage to solve problems involved in the design, installation, commissioning, operation, repair and maintenance of cold storage; communicate with the sector and clients °</p>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses elementary knowledge of air-conditioning and refrigeration.</p>