

1. Title	Apply knowledge of safety operation of air-conditioning and refrigeration system
2. Code	EMACSH301A
3. Range	Apply safety knowledge of air-conditioning and refrigeration system in performing tasks of operation, repair, maintenance, safety, and health and environmental protection for the system at air-conditioning and refrigeration system work sites or machine rooms.
4. Level	3
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of safety operation of air-conditioning and refrigeration system</p> <ul style="list-style-type: none"> ◆ Understand the principles and functions of refrigeration system safety devices, including: <ul style="list-style-type: none"> • Pressure safety devices (including pressure gauge, safety valve, safety diaphragm and fusible plug) • Liquid-level safety devices (including float valve and float type level controller) • Temperature safety control devices (including thermostat and overheat cut-out controller) ◆ Understand safety operation procedures of refrigeration equipment, including: <ul style="list-style-type: none"> • Safety operation procedures for valve • Safety operation procedures for reciprocating compressor • Safety operation procedures for screw compressor • Safety operation procedures for centrifugal compressor • Safety operation procedures for cooling tower ◆ Understand refrigeration system the safety operation procedures for auxiliary equipment, including: <ul style="list-style-type: none"> • Safety operation procedures for expansion valve • Safety operation procedures for refrigerant solenoid valve and filter • Safety operation procedures for water pump • Safety operation procedures for ventilation fan • Safety operation procedures for removing oil from the refrigeration system ◆ Possess the knowledge of lifting operation and of using lifting appliances and rigs, including: <ul style="list-style-type: none"> • Safety operation procedures for lifting operation • Use of hook, wire rope, chain sling, shackle and typical lifting appliances and rigs • Use of typical small lifting equipment

	<p>6.2 Application of knowledge of safety operation of air-conditioning and refrigeration system</p> <p>◆ Apply knowledge of safety operation of air-conditioning and refrigeration system to prevent air-conditioning and refrigeration practitioners from having accidents when installing, operating, repairing and maintaining air-conditioning and refrigeration equipment so as to protect the safety of human being and equipment</p>
<p>7. Assessment Criteria</p>	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to apply knowledge of safety operation of air-conditioning and refrigeration system to prevent air-conditioning and refrigeration practitioners from having accidents when installing, operating, repairing and maintaining air-conditioning and refrigeration equipment.</p>
<p>8. Remarks</p>	<p>The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of air-conditioning and refrigeration.</p>