

1. Title	Repair and maintain screw-type chiller plants
2. Code	EMACOR313A
3. Range	Perform repair and maintenance of screw-type chiller plants at chiller plant rooms.
4. Level	3
5. Credit	9
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Knowledge of repairing and maintaining screw-type chiller plants</p> <ul style="list-style-type: none"> <li>◆ Understand the construction and working principles of screw-type chiller plants</li> <li>◆ Understand the methods of eliminating typical faults in screw-type chiller plants</li> <li>◆ Understand the details of screw-type chiller plant maintenance</li> </ul> <p>6.2 Methods and procedures of repairing and maintaining screw-type chiller plants</p> <ul style="list-style-type: none"> <li>◆ Perform routine maintenance for screw-type chiller plants, including: <ul style="list-style-type: none"> <li>• Checking and monitoring if the chiller plants operate properly</li> <li>• Removing and charging refrigerant oil for maintenance after the chiller plant shuts down</li> <li>• Performing leak check, recovery and charging of refrigerants</li> </ul> </li> <li>◆ Perform routine repair for screw-type chiller plants, including: <ul style="list-style-type: none"> <li>• Performing routine repair for the chiller plant compressor</li> <li>• Performing routine repair for the condenser and evaporator</li> <li>• Performing routine repair for the refrigerant pipes, water pipes and valves</li> </ul> </li> <li>◆ Troubleshoot and repair faults in screw-type chiller plants, including: <ul style="list-style-type: none"> <li>• Find out causes of faults in chiller plants according to the operating condition and operating parameters of the chiller plants</li> <li>• Repair the faults after finding out the causes</li> </ul> </li> </ul> <p>6.3 Professionalism in repairing and maintaining screw-type chiller plants</p> <ul style="list-style-type: none"> <li>◆ Follow the instructions of the repair and maintenance manual to perform repair and maintenance for screw-type chiller plants</li> <li>◆ Understand the code of practice to undertake the tasks of repairing and maintaining screw-type chiller plants</li> </ul>
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to complete repair and maintenance of various types of screw-type chiller plants systematically and efficiently; and</p> <p>(ii) Capable to follow the code of practice to undertake the tasks of repairing and maintaining screw-type chiller plants.</p>
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses elementary knowledge of chilled water type air-conditioning and refrigeration systems.