

1. Title	Select chiller plants
2. Code	EMACDE602A
3. Range	Apply highly specialized technical research and scholastic skills, and make complex information analysis, planning and judgement, so as to select chiller plant in design studios.
4. Level	6
5. Credit	9
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 knowledge of selecting chiller plant</p> <ul style="list-style-type: none"> ◆ Understand the characteristics and using requirements of various types of refrigeration compressors, including: <ul style="list-style-type: none"> • Reciprocating compressor • Screw compressor • Centrifugal compressor ◆ Understand the characteristics and using requirements of various types of condensers and evaporators ◆ Understand the characteristics and using requirements of metering devices and auxiliary equipment <p>6.2 Methods and procedures of selecting chiller plant</p> <ul style="list-style-type: none"> ◆ Confirm the thermodynamic data of refrigeration cycle, including: <ul style="list-style-type: none"> • Calculating the thermodynamic parameters of single stage compression cycle, two-stage compression cycle, multi-stage compression cycle • Confirming the type of compression cycle mode for the chiller • Selecting appropriate refrigerants • Calculating the thermodynamic parameters of practical compression refrigeration cycle (including the coefficient of performance C.O.P., capacity and power of compressor, heat load of evaporator and condenser, etc.) ◆ Select appropriate compressor according to the refrigeration system requirements ◆ Select condensers and evaporators, including: <ul style="list-style-type: none"> • Selecting appropriate condenser according to the refrigeration system requirements • Selecting appropriate evaporator according to the refrigeration system requirements ◆ Select metering devices and auxiliary equipment, including: <ul style="list-style-type: none"> • Selecting appropriate metering devices according to the refrigeration system requirements • Selecting appropriate oil separator and heat exchanger according to the refrigeration system requirements • Selecting appropriate auxiliary equipment according to the refrigeration system requirements

	<p>6.3 Professionalism in selecting chiller plant</p> <p>◆ Select chiller plant according to legal requirements and codes of practice</p>
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to apply highly specialized technical research and scholastic skills, and make complex information analysis, planning and judgement, so as to complete the task of selecting chiller plant.</p>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses general knowledge of air-conditioning and refrigeration systems.</p>