

1. Title	Perform refrigeration copper tubing work
2. Code	EMACIN201A
3. Range	Use refrigeration copper tubing work tools and oxy-acetylene brazing tools to install and service refrigeration copper tubing at installation or servicing sites under a degree of instruction.
4. Level	2
5. Credit	4
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Properties of refrigeration copper tubing and method of using tubing tools</p> <ul style="list-style-type: none"> ◆ Understand the properties of refrigeration copper tubing, including: <ul style="list-style-type: none"> • Method of showing the dimensions of refrigeration copper tubing • Types of refrigeration copper tubing • Method of storing refrigeration copper tubing ◆ Understand the uses of refrigeration copper tubing tools, including: <ul style="list-style-type: none"> • Tube cutter, tube bender, flaring tool, swaging tool and locking pliers ◆ Understand the oxy-acetylene brazing method, including: <ul style="list-style-type: none"> • Proper way of using oxy-acetylene brazing equipment • Way of preparing copper tube brazing joints • Adjustment of brazing flame • Operation procedures of oxy-acetylene brazing and salient points <p>6.2 Methods and procedures of copper refrigeration tube machining</p> <ul style="list-style-type: none"> ◆ Cut, bend, flare and seal the 15.88mm refrigeration copper tubing according to drawings and conduct pressure test successfully using 1,000kPa nitrogen ◆ Conduct oxy-acetylene silver-brazing to the 15.88mm refrigeration copper tubing according to drawings and conduct pressure test successfully using 1,000kPa nitrogen <p>6.3 Professionalism in copper refrigeration tube machining</p> <ul style="list-style-type: none"> ◆ Operate oxy-acetylene silver-brazing equipment and accessories correctly and safely ◆ Wear proper personal protective equipment correctly ◆ Follow the legal requirements and guidelines on oxy-acetylene brazing in Hong Kong
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to fabricate the 15.88mm refrigeration copper tubing according to drawings and conduct pressure test successfully using 1,000kPa nitrogen ; and</p> <p>(ii) Capable to conduct oxy-acetylene silver-brazing to the 15.88mm refrigeration copper tubing and conduct pressure test successfully using 1,000kPa nitrogen</p>
8. Remarks	This unit of competency is applicable to air-conditioning and refrigeration engineering practitioners in general.