

**Specification of Competency Standards**  
**for the Manufacturing Technology Industry**  
**Unit of Competency**

Functional Area - Product Manufacturing

Title	Mechanical surface finishing
Code	106420L3
Range	This unit of competency is applicable to the production department of the corporation of metal product manufacturing industry. Practitioners should be capable understand the knowledge of mechanical surface finishing, so as to carry out mechanical surface finishing and solve production problems.
Level	3
Credit	3 (For Reference Only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> <li>1. Understand the technologies and techniques of mechanical surface finishing <ul style="list-style-type: none"> <li>• Understand the principles and applications of mechanical surface finishing, including grinding, polishing and laser engraving</li> <li>• Understand the common causes and defects of mechanical surface finishing, including deviation of thickness after polishing, distortion, black spots and chipping corners</li> <li>• Understand the factors affect mechanical surface finishing, such as materials selection, processing time, parameter setting and using supporting tools</li> <li>• Recognise the types, structures, working principles, specifications, applications and operating methods of the relevant equipment of mechanical surface finishing</li> <li>• Understand the methods and techniques of all kinds of mechanical surface finishing</li> </ul> </li> <li>2. Carry out mechanical surface finishing <ul style="list-style-type: none"> <li>• Determine whether the products are suitable for mechanical surface finishing</li> <li>• Capable to correctly select and operate the equipment and supporting tools of mechanical surface finishing</li> <li>• Carry out mechanical surface finishing and after that, check the appearance, size and geometry of the product, ensure the functions and operation of the product will not be affected by mechanical surface finishing</li> <li>• Review the production efficiency of mechanical surface finishing</li> <li>• Identify and systematically analyse the common quality problems of mechanical surface finishing and improve them</li> <li>• Carry out simple adjustments, maintenance and repair of commonly used equipment and grinding tools of mechanical surface finishing</li> <li>• Recycle the dust generated by mechanical surface treatment and keep the workshop clean</li> </ul> </li> <li>3. Professional handling of mechanical surface finishing <ul style="list-style-type: none"> <li>• Follow safety guidelines and related codes of practice of mechanical surface finishing, in accordance with the requirements of technologies and techniques, product specifications, production efficiency, carry out mechanical surface finishing</li> </ul> </li> </ol>
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> <li>• Capable to carry out mechanical surface finishing in accordance with the drawing and requirements of technologies and techniques, and solve production problems</li> <li>• Capable to independently operate the commonly used relevant equipment and supporting tools of mechanical surface finishing and carry out simple daily maintenance.</li> </ul>
Remark	