

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

Functional Area - Product Design and Development

Title	Surface treatment and heat treatment of metal product prototypes
Code	106388L3
Range	This unit of competency is applicable to design and development departments of metal products manufacturing corporations. Practitioners should be familiar with metal surface treatment and heat treatment, and application on metal product samples, so as to ensure the samples meet the functional requirements and size.
Level	3
Credit	3 (For Reference Only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> 1. Understand knowledge of metal surface treatment and heat treatment <ul style="list-style-type: none"> • Understand different principles and applications of heat treatment methods. • Understand different principles and applications of surface treatment methods, such as electroplating and coating • Understand different facilities, tools and materials needed for surface treatment, and also meet the sample requirements and make a suitable selection 2. Carry out surface treatment and heat treatment of metal products <ul style="list-style-type: none"> • According to the device configuration in the corporation, carry out different surface treatments for samples, and also adjust relevant parameters • According to the device configuration in the corporation, carry out different heat treatments for samples, and also adjust relevant parameters, such as temperature and time. • Select suitable service providers to carry out surface treatment and heat treatment of metal products, and also explain the relevant requirements of surface treatment and heat treatment of samples to service providers • After completing surface treatment and heat treatment, check the appearance, size and geometry of the samples, and ensure the surface treatment and heat treatment will not affect the sample functions and operations 3. Professional handling of surface treatment and heat treatment of metal products samples <ul style="list-style-type: none"> • Carefully consider elements of surface treatment and heat treatment of metal products samples, including safety, risk, productivity, quality, environmental protection and cost, so as to meet all requirements.
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> • According to the requirements of surface treatment and heat treatment of the metal product samples, measure the device configuration in the corporation and evaluate if service providers are needed. • Ensure the surface treatment and heat treatment will not affect the sample functions and operations of the metal product samples
Remark	