

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

Functional Area - Product Manufacturing

Title	Non-conventional and special processing of sheet metal
Code	106516L4
Range	This unit of competency is applicable to the production department of the corporation of metal stamping and sheet metal product manufacturing industry. Practitioners should be capable to understand the knowledge of non-conventional and special processing of sheet metal, so as to carry out non-conventional and special processing of sheet metal and solve production problems
Level	4
Credit	3 (For Reference Only)
Competency	<p>Performance Requirements</p> <ol style="list-style-type: none"> 1. Understand the techniques and technologies of non-conventional and special processing of sheet metal <ul style="list-style-type: none"> • Understand the types, characteristics and applications of all kinds of sheet metal materials, such as SPHC, SPCC, SECC, SGCC, low / high hardness of copper, low / high hardness of aluminum, stainless steel and silicon steel • Understand the principles and applications of non-conventional and special processing of sheet metal, such as Fine Blanking, Multi-Slide Forming, Hydroforming, CNC Turret Punching and Press Brake Bending, Laser Cutting & Welding and Water Jet Cutting • Understand the characteristics of all kinds of sheet metal, such as physical performance, chemical performance and mechanical performance • Understand the common product defects of non-conventional and special processing of sheet metal, including scorching, deformation, bending rebound and rough edges • Understand the types, structures, working principles, specifications, applications and operating methods of the relevant equipment of non-conventional and special processing of sheet metal • Understand the methods and techniques of non-conventional and special processing of sheet metal 2. Carry out non-conventional and special processing of sheet metal <ul style="list-style-type: none"> • Set the appropriate processing parameters of non-conventional and special processing of sheet metal, such as the laser intensity, focusing point, cutting speed and pressure strength of hydroforming • According to the factors of production volume, product shape, precision, materials, tooling size, select the appropriate equipment of non-conventional and special processing of sheet metal • Identify and systematically analyse the common quality problems of non-conventional and special processing of sheet metal and improve them • Effectively assemble, disassemble and correct the workpiece and tooling of non-conventional and special processing equipment of sheet metal • Carry out simple adjustments, maintenance and repair of commonly used equipment and tools of non-conventional and special processing of sheet metal 3. Professional handling of non-conventional and special processing of sheet metal <ul style="list-style-type: none"> • Follow safety guidelines and related codes of practice, in accordance with product specifications and production efficiency requirements of non-conventional and special processing of sheet metal
Assessment Criteria	The integrated outcome requirements of this unit of competency are:

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	<ul style="list-style-type: none">• Capable to carry out non-conventional and special processing of sheet metal and solve production problems in accordance with the drawings and requirements of technologies and techniques• Capable to operate the equipment and supporting tools of non-conventional and special processing of sheet metal independently and make simple daily maintenance
Remark	