

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

Functional Area - Process Design and Development

Title	Develop and formulate automated processing procedures, methods, and equipment for stamping products to improve production efficiency, stability, and safety
Code	106488L5
Range	This unit of competency is applicable to the process design and development departments / engineering departments of enterprises engaged in the metal stamping and sheet metal industries. Practitioners should be capable to will possess the knowledge to facilitate automation within the industry
Level	5
Credit	4
Competency	Performance Requirements - Understand relevant knowledge of various methods and equipment for automated stamping processes - Understand types, specifications, and applications of various stamping automation processing and parts handling peripheral equipment, such as transfer robots, multi-axis robots, conveyor belts, leveling machines, and feeders, etc. - Understand advantages, disadvantages, upgrades and maintenance methods of various automated stamping processing and parts handling equipment existed on the market - Understand types, specifications, functions, and applications of various automated stamping inspection equipment, such as misfeed detectors, stacked part detectors, optical high-speed camera measuring instruments, and integrated measuring instruments, etc. - Understand advantages, disadvantages, upgrades and maintenance methods of various automated stamping testing equipment existed on the market - Understand types, specifications, and applications of commonly used pneumatic, hydraulic, vibratory plate, and programmable logic controller (PLC) components and systems - Understand data acquisition, analysis principles and basic algorithms of various automated stamping processing equipment for handling and inspecting parts - Understand data acquisition, analysis principles and basic algorithms of various automated stamping processing equipment for handling and inspecting parts - Develop and formulate various automated stamping processes and equipment - Able to develop and select automated processing procedures, methods, and equipment for metal stamping products based on meeting design requirements, production volume, and quality criteria - Able to ensure the processes and equipment are free of defects and minimise the failure rate - Able to evaluate effectiveness of stamping products automation development and improve continuously - Able to minimise the product defect rate after development of automated processes and equipment - Able to develop, design, and install appropriate data acquisition and analysis systems for automated production systems - Professional handling of various stamping automation processes and equipment development and formulation - Able to identify potential safety issues and accidents, optimise the developed and formulated systems, improve efficiency, stability, and safety of automated systems, thereby further promoting the

	intelligentisation of production lines
Assessment Criteria	The integrated outcome requirements of this unit of competency are: • Able to formulate automated processing and testing of stamped products in line with development and product needs of enterprise • Able to develop and formulate automated processing procedures, methods, and equipment for stamping products, thereby improve production efficiency and reduce costs • Able to formulate technical specifications for data collection, transmission, and analysis based on the objectives of intelligentisation
Remark	This is the updated version of UoC 106488L4