

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

Functional Area - Process Design and Development

Title	Apply pneumatic, hydraulic and electric devices to develop automation system
Code	106497L4
Range	This unit of competency is applicable to the corporations of the Manufacturing Technology Industry. Practitioners should be capable to base on plan of automation assembly systems, apply pneumatic, hydraulic and electric devices to develop automation system
Level	4
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Understand relevant knowledge of application of pneumatic, hydraulic and electric devices</p> <ul style="list-style-type: none"> • Understand the operation principles , control system design methods and techniques of pneumatic, hydraulic and electric devices • Understand the types, specifications and applications of pneumatic elements, such as cylinders, control valves, flow switch, vacuum elements and filters • Understand the types, specifications and applications of hydraulic elements, such as all kinds of pumps, valves, control valves and cylinders • Understand the types, specifications and applications of electric elements, such as Circuit breaker, relay and resistor (Circuit breaker) (Relay) (Resistor) • Understand the signal of symbols and control charts of pneumatic, hydraulic and electric devices • Understand the technology development trend of pneumatic, hydraulic and electric devices of the industry <p>2. Apply pneumatic, hydraulic and electric devices</p> <ul style="list-style-type: none"> • According to the plan of automation assembly systems, apply pneumatic, hydraulic and electric devices, develop automation system • Select and apply the appropriate pneumatic, hydraulic and electric elements • Draw all kinds of control charts, such as Pneumatic Diagram and Circuit Diagram • Review the benefits of pneumatic, hydraulic and electric devices and carry out enhancement • Master the new technology of pneumatic, hydraulic and electric devices and apply on automation system <p>3. Professional handling of application of pneumatic, hydraulic and electric devices</p> <ul style="list-style-type: none"> • Meet the design, safety, production quantity and quality requirements as a precondition, develop automation system of pneumatic, hydraulic and electric devices • Ensure the safety operation of the developed automation system
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> • Capable to base on plan of automation assembly systems, apply pneumatic, hydraulic and electric devices, develop automation system • Capable to draw all kinds of control charts, such as Pneumatic Diagram and Circuit Diagram
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