

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

Functional Area - Product Design and Development

Title	Progressive and transfer sheet metal stamping die functional design
Code	106469L4
Range	This unit of competency is applicable to the design and development departments of Manufacturing Technology Industry. Practitioners should be capable to carry out progressive and transfer sheet metal stamping die functional design in accordance with the combination and structural design of sheet metal die
Level	4
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Understand the knowledge of progressive and transfer sheet metal stamping die functional design</p> <ul style="list-style-type: none"> • Understand the customer's requirements on appearance and functions, such as flashing, surface appearance and connection point • Understand relevant international standards of progressive and transfer sheet metal stamping die functional design • Understand structure and application methods of single sheet metals stamping dies, such as punching dies, bending dies and rolling • Understand the types, structures and designs of progressive and transfer sheet metal stamping dies • Understand the calculation methods of utilization of strip material • Understand the principle of automatic feed • Understand the mechanical design and application methods of automatic feeder • Master the skills of design strip layout drawing • Understand the design skills of progressive and transfer sheet metal stamping die functional design, such as the caulation of the distribution of blanking and pressure centre • Recognise the working principles of automatic assembly of sheet metal stamping die • Recognise the commonly used types, structures, specifications and working principles of the commonly used equipment of progressive and transfer sheet metal stamping • Understand the commonly used types and specifications of surface treatment of progressive and transfer sheet metal stamping die <p>2. Carry out progressive and transfer sheet metal stamping die functional design</p> <ul style="list-style-type: none"> • According to the integrated design of sheet metal stamping die, and the requirements of product precision, shape, production speed, degree of automation etc, design appropriate and detailed workflow layout of progressive and transfer stamping process, including the number of steps, each stamping action in workstation, feeding and pickup method • Design different sheet metal stamping process which includes punching, bending, feeding, rolling etc for progressive and transfer sheet metal stamping die combination • Allocate progressive and transfer sheet metal stamping die functional design requirements for each team member who is responsible for single and composite mould functional design, and carry out management • Design and compare different layout methods of strands to improve material utilisation • In accordance with all kinds of requirements of the structure of metal stamping dies and the production of sheet metal stamping products, set the appropriate tolerance and processing for progressive and transfer sheet metal stamping die, so as to achieve requirements of cumulative tolerance limits of the dies, workpiece sliding /fixed and coordination, and provide appropriate description of workpiece drawing

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	<ul style="list-style-type: none"> • According to the requirements of different products, select the appropriate die and steel • According to different functional design requirements, select the appropriate die surface treatment • Communicate with internal and external customers and stakeholders and achieve consistent standards <p>3. Professional handling of progressive and transfer sheet metal stamping die functional design</p> <ul style="list-style-type: none"> • Detailedly consider elements such as safety, risk, productivity, quality, environmental protection and cost, carry out progressive and transfer sheet metal stamping die functional design and meet all aspects of requirements
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> • Capable to base on the combination of sheet metal mould design and structural design, set the appropriate tolerance and processing for progressive and transfer sheet metal stamping die, complete the progressive and transfer sheet metal stamping die functional design • Capable to draw all workpiece drawing, provide appropriate instructions and ensure the content is accurate
Remark	