

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

Functional Area - Product Manufacturing

Title	Set parameters, implement traditional plastic moulding and resolve production problems
Code	106427L3
Range	This unit of competency is applicable to the production department of the corporation of plastics industry. Practitioners should be capable to set parameters for traditional plastic production, implement plastic moulding, analyse defects of products and resolve relevant production problems.
Level	3
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Understand relevant knowledge of traditional plastic production</p> <ul style="list-style-type: none"> <li>• Understand the types and working principles of traditional plastic production, such as blow moulding, vacuum molding ,plastic extruding, hot forming and rotational moulding</li> <li>• Understand the common causes of defects of traditional injection moulding, such as colour difference, stranded gas , injection lines, weld lines, surface peeling, anti-stress white / stress cracking, isosbestic point near sprue, and the effects of the record grooves</li> <li>• Understand the factors that affect the traditional plastic production, such as materials selection, pre-processing handling of plastics, maintenance of machinery and inspection, post-processing handling of plastics and packaging, construction and maintenance of tooling, using auxiliary equipment and environmental control</li> <li>• Understand the commonly used materials of traditional plastic production, applications of equipment and auxiliary equipment</li> <li>• Understand parameter setting methods of traditional plastic production and master the rapid adjustment and control skills with the actual materials, tooling and mechanical conditions</li> <li>• Understand the meaning of the parameters setting of traditional plastic production, such as mould locking force, ejection force, injection pressure retaining time and filling time</li> </ul> <p>2. Carry out traditional plastic production</p> <ul style="list-style-type: none"> <li>• Identify the causes leading to different tradition plastic defects, distinguish the problem of plastic materials, tooling design and wrong adjustment of processing parameters</li> <li>• Systematically calculate the production parameters by different mechanical equipment and tooling for different product production, so as to shorten the machine adjustment times and optimize product quality and stability</li> <li>• Apply different formulas to calculate the technologies and techniques, set the plastic production parameters, such as cycle time, cooling time, mould locking force setting and injection schedule, so as to achieve production efficiency and quality requirements</li> <li>• Records the relevant plastic production technologies and techniques parameters and production records</li> <li>• Select and operate commonly used traditional plastic production equipment and auxiliary equipment for production</li> <li>• Carry out general preventive maintenance for tooling, equipment and auxiliary equipment</li> </ul> <p>3. Professional handling of traditional plastic production</p> <ul style="list-style-type: none"> <li>• Follow safety guidelines and related codes of practice of traditional plastic production, in accordance with the design requirements, carry out traditional plastic production</li> </ul>
Assessment Criteria	The integrated outcome requirements of this unit of competency are:

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	<ul style="list-style-type: none"><li>• Capable to carry out technological analysis of traditional plastic production, review the applicable technologies and techniques, the required materials and restrictions, showing the problems of traditional plastic production technology and make improvements.</li></ul>
Remark	