

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

Functional Area - Product Quality Control and Testing

Title	Manual and automatic geometric dimension measurement
Code	106445L3
Range	This unit of competency is applicable to all corporations of Manufacturing Technology Industry. Practitioners should be capable to carry out manual and automatic geometric dimension measurement
Level	3
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Understand relevant knowledge of manual and automatic geometric dimension measurement</p> <ul style="list-style-type: none"> • Understand the basic principles of metrology and measurement • Understand the principles, methods and techniques of manual geometric dimension measurement • Understand all kinds of marked symbols and their meaning on the drawing • Understand the measurement methods and range of geometric dimensions and tolerances, such as length, angle, parallelism, verticality, roundness, concentricity, shape and contour • Understand the balance and adaptability • Understand the foundation principle of operation of measuring instruments, such as CMM and optical coordinate measuring instrument • Understand the using methods, techniques, and limitations of measuring instruments and tools <p>2. Carry out manual and automatic geometric dimension measurement</p> <ul style="list-style-type: none"> • Read and understand the requirements of all kinds of geometries measure and identify datum surface • Select the appropriate measuring instruments, tools, fixtures of supporting measurement, and carry out manual and automatic geometric dimension measurement • Operate all kinds of contact and non-contact measurement equipment, and carry out measurement • Make the measurements recorded in accordance with the geometry and complete the relevant quality inspection report • Carry out simple preventive maintenance of all kinds of measuring instruments and tools, so as to maintain its accuracy <p>3. Professional handling of manual and automatic geometric dimension measurement</p> <ul style="list-style-type: none"> • Ensure the measurement data is accurate • Follow the safety guidelines and relevant requirements, carry out manual and automatic geometric dimension measurement
Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> • Capable to select and operate appropriate measuring instruments, tools, fixtures of supporting measurement, and carry out manual and automatic geometric dimension measurement • Capable to make the measurements recorded in accordance with the geometry and compile the relevant quality inspection report
Remark	