

Specification of Competency Standards
for the Testing, Inspection and Certification Industry
Unit of Competency

Functional Area - Testing Operations

Title	Perform foundation tests
Code	105831L5
Range	This unit of competency (UoC) covers the abilities to carry out tests on foundation piles independently at building construction sites and analyse test data to critically evaluate the bearing strength and integrity of piles.
Level	5
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge of static and dynamic tests on foundation piles at building construction sites</p> <ul style="list-style-type: none"> • Specify the bearing strength requirement of building structure foundation. • Differentiate the applications of piles. • Describe the soil properties and identify pile types. • Identify relevant piling mechanisms. • Employ the principles and concepts of foundation tests and identify test methods/standards used for examining foundation piles, e.g.: <ul style="list-style-type: none"> ○ ultrasonic cross-hole test, ○ pile integrity test, ○ dynamic pile test, ○ static loading test, ○ echo sounding test, ○ borehole inspection, ○ plate load test. • Identify the specification requirements of foundation tests. • Explain the principles and operation of equipment used for foundation tests. • Specify the calibration requirement of equipment. <p>2. Perform foundation tests</p> <ul style="list-style-type: none"> • Apply appropriate test methods/standards and select testing equipment for foundation tests. • Set up the testing equipment and verify equipment settings in accordance with test methods/standards. • Carry out selected tests on foundation piles independently according to test methods/standards. • Carry out required calibration checks on testing equipment and conduct validation checks on test data. • Analyse test data to critically evaluate the bearing strength and integrity of piles. <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> • Ensure integrity and confidentiality of test data by observing the relevant code of conduct. • Ensure safe work practices and use appropriate personal protective equipment at the testing site.
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> • carry out dynamic / static tests on foundation piles independently and safely by selecting and applying appropriate testing equipment according to the requirements of test methods/standards and test specifications,

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	<ul style="list-style-type: none">• analyse test data accurately by verifying equipment calibration status and checking the validity of test data,• critically evaluate the bearing strength and integrity of piles.
Remark	