

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

Functional Area - Testing Operations

Title	Perform basic non-destructive tests on welds
Code	105832L4
Range	This unit of competency (UoC) covers the abilities to carry out basic non-destructive tests (NDT) on welds including magnetic particle test and/or liquid penetrant test by applying appropriate NDT techniques and equipment, and analyse test data to examine the conditions of welds.
Level	4
Credit	4 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Possess knowledge of basic non-destructive tests (NDT) applicable to welds</p> <ul style="list-style-type: none"> • Employ the principles and concepts of basic non-destructive tests and identify test methods used for examining welds, e.g.: <ul style="list-style-type: none"> ○ magnetic particle test, ○ liquid penetrant test. • Define limitations of applying test methods. • Translate NDT codes, standards, specifications and procedures into NDT instructions adapted to actual working conditions. • Explain the principles and operation of equipment used for basic non-destructive tests on welds. • Specify the calibration requirement of equipment. <p>2. Perform basic non-destructive tests on welds</p> <ul style="list-style-type: none"> • Prepare NDT instructions. • Apply appropriate NDT techniques and testing equipment for basic non-destructive tests on welds. • Set up the testing equipment and verify equipment settings. • Carry out magnetic particle test and/or liquid penetrant test on welds according to test methods and NDT instructions. • Carry out required calibration checks on testing equipment and conduct validation checks on test data. • Analyse test data according to applicable codes, standards, specifications or procedures to examine the conditions of welds. <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 testing sites.
Assessment Criteria	<p>The integrated outcome requirements of this UoC are the abilities to:</p> <ul style="list-style-type: none"> • carry out basic non-destructive tests on welds independently and safely by applying appropriate NDT techniques and testing equipment according to the requirements of test methods and test specifications, • analyse test data to examine the condition of welds by verifying equipment calibration status and checking the validity of test data within the acceptable range specified in test methods.
Remark	Practitioners should possess good near-vision acuity (e.g. reading a minimum of Times Roman N4.5 or equivalent letters at not less than 30 cm with one or both eyes) and colour vision.