

1. Title	Analysis of non-destructive test (NDT) – Liquid penetrant Testing
2. Code	EMCUMA207A
3. Range	Use liquid penetrant, at servicing centres or locations with operating equipment, to inspect equipment or materials for surface cracks and make a simple analysis.
4. Level	2
5. Credits	3
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Techniques and principles of inspecting mechanical equipment for cracks</p> <ul style="list-style-type: none"> ◆ Understand the advantages and limitations of liquid penetrant testing, especially in reference to those of magnetic particle inspection ◆ Understand that liquid penetrant testing is applicable to various types of metals, and some plastic and ceramic materials ◆ Know about the procedural adjustments to be made for inspecting different sizes of surface cracks ◆ Understand that the tools (such as black light lamp) and working procedures used for coloured penetrant and fluorescent penetrant are different ◆ Understand the chemical hazards caused by penetrant and developers, and relevant concerns for use <p>6.2 Methods and procedures of analyzing and identifying cracks on metal equipment</p> <ul style="list-style-type: none"> ◆ Capable to use liquid penetrant and developers effectively; make a simple analysis of the surface cracks of equipment or materials ◆ Capable to identify surface cracks, surface defects and various types of residues left on the surface ◆ Capable to mark the position with cracks effectively ◆ Capable to keep record of inspection and analysis effectively <p>6.3 Professionalism in using penetrant and developers</p> <ul style="list-style-type: none"> ◆ Have adequate hands-on practice in liquid penetration inspection according to international standards or in-house guidelines; record and analyze detected surface cracks according to requirements
7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to use liquid penetration and developer inspection method safely and correctly; identify equipment or materials for surface cracks and make a simple analysis.</p>
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses the competency of EMCUMA102A “Analysis of non-destructive test (NDT) – Liquid penetrant Testing”.