

1. Title	Aeronautical NDT inspections by magnetic particle methods
2. Code	EMAMWS416A
3. Range	Magnetic particle methods aeronautical NDT inspections are usually carried out in a specialist bay or workshop
4. Level	4
5. Credit	9
6. Competency	<p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Working principles</p> <ul style="list-style-type: none"> <li>◆ Understand the working principles for the magnetic particle methods NDT inspections.</li> </ul> <p>6.2 Inspection methods and procedures</p> <ul style="list-style-type: none"> <li>◆ Able to review the maintenance documents and procedures to decide on maintenance task.</li> <li>◆ Able to prepare the work area, obtain and check the resources for serviceability in accordance with the procedures, e.g. publications, materials, tools, equipment, safety equipment, environmental conditions established.</li> <li>◆ Able to match the identification of part with documentation by comparing serial and/or part numbers.</li> <li>◆ Able to prepare the part for inspection in accordance with the procedures, e.g. lean surface finish.</li> <li>◆ Able to set up the inspection equipment is set up in accordance with the procedures.</li> <li>◆ Able to magnetize the part in accordance with the procedures, e.g. alternating current (AC), direct current (DC), half wave DC, current flow, direct or indirect induction, circular, longitudinal.</li> </ul>

6.3 Professional approach

- ◆ Able to apply the particles, and observe the dwell time in accordance with the procedures,e.g. brush, spray, dip, flow.
- ◆ Able to inspect the part in accordance with the procedures,e.g. inspection equipment, standards, specifications, precision measuring equipment.
- ◆ Able to understand the legislative requirements, aviation authority requirements, manufacturers' publications and the maintenance organizations' approved maintenance practices and requirements in carrying out the task.
- ◆ Able to complete the task within the stipulated duration.
- ◆ Able to prepare the inspected part for storage or transit in accordance with the procedures,e.g. post-test clean, inhibit, blank, pack.
- ◆ Able to check the resources for serviceability and return them to service or storage in accordance with the procedures,e.g. tools, equipment, safety equipment, publications.
- ◆ Able to handle the unused materials in accordance with the procedures,e.g. serviceable, unserviceable, waste, hazardous.
- ◆ Able to complete the documentation in accordance with the procedures,e.g. labels, work cards, log books.

	<p style="text-align: center;">◆ Able to return the work environment in a state which enables the next task to begin in accordance with the procedures.</p>
<p>7. Assessment Criteria</p>	<p>The integral outcome requirement of this UoC is:</p> <p>(i) Able to carry out aeronautical NDT (non destructive testing) inspections using magnetic particle methods by preparing the work area and equipment, inspecting the part, and completing the post inspection tasks.</p>
<p>8. Remarks</p>	<p>(Ref: HKAR-66 Module 7.15 &amp; 7.18)</p> <p>Candidates must pass the following vision examinations:</p> <p>1 Near vision acuity</p> <p>The examination should assure natural or corrected near-distance acuity in at least one eye to show that the applicant is capable of reading a minimum of Jaeger Number 2 or equivalent type and size letter at a distance of not less than 12 inches (30.5cm) on a standard Jaeger test chart. The ability to perceive an Ortho-Rater minimum of 8 or similar test pattern is also acceptable.</p> <p>2 Color contrast differentiation</p> <p>The examination should demonstrate that the applicant is capable of distinguishing and differentiating contrast among colors used in the method.</p> <p>Ref: NZQA - 4087</p>