

PERLAKSANAAN LATIHAN DAN PEPERIKSAAN PRAKTIKAL KAEDAH PARTIKEL MAGNET

1.0 LATIHAN PRAKTIKAL

a. Latihan Praktikal Magnetik Partikel Tahap 1 & 2

- i. PB perlu menyediakan dan memastikan peralatan seperti berikut dalam keadaan baik dan berfungsi:

<i>No</i>	<i>Equipment</i>	<i>Ratio</i>
1.	<i>Testing Instruction</i>	1:1
2.	<i>Acceptance Criteria</i>	1:1
3.	<i>AC Yoke</i>	1:5
4.	<i>DC Yoke</i>	1:5 (1:10)
5.	<i>Permanent Yoke</i>	1:5
6.	<i>Coil Magnetiser Set</i>	1:25
7.	<i>Prod Magnetiser Set</i>	1:25
8.	<i>Head Shot Magnetiser Set</i>	1:25
9.	<i>Central Conductor Set</i>	1:25
10.	<i>De-magnetizer</i>	1:25
11.	<i>Lux meter / Photometer</i>	1:25
12.	<i>Black Light Meter / Radiometer</i>	1:25
13.	<i>UV- Alight / Black Light</i>	1:5
14.	<i>Dark Room with well ventilated.</i>	1:25
15.	<i>Thermometer</i>	1:25
16.	<i>Centrifugal Tube</i>	1:25
17.	<i>Lifting Weight (9 kg – AC/DC Yoke)</i>	1:25
18.	<i>Lifting Weight (18 kg – Permanent Yoke)</i>	1:25
19.	<i>Pie Field Indicator</i>	1:25
20.	<i>Burmah Castrol Magnetic Field Indicators</i>	1:25
21.	<i>Ketos Test Ring</i>	1:25
22.	<i>MTU-No3 Test Block</i>	1:25
23.	<i>Personal Protection Equipment (PPE)</i>	1:1

<i>No</i>	<i>Consumables</i>
1.	<i>Wet Visible iron particle and Carrier</i>
2.	<i>Wet Fluorescent iron particle and Carrier</i>
3.	<i>Dry Iron Powder</i>
4.	<i>White Contrast (Yoke Technique)</i>

5.	<i>Cleaner</i>
6.	<i>Cotton Rags</i>
7.	<i>Dust mask</i>
8.	<i>Cotton Gloves</i>

No	Test Specimen	Minimum Quantity
1.	<i>Welded Construction (Plate) – minimum size 10" x 10"</i>	<i>4 pieces</i>
2.	<i>Welded Construction (Pipe)</i>	<i>4 pieces</i>
3.	<i>Welded Construction (T Joint)</i>	<i>1 piece</i>
4.	<i>Engineering Components – Rods (hollow)</i>	<i>2 pieces</i>
5.	<i>Engineering Components - Rings</i>	<i>2 pieces</i>
6.	<i>Engineering Components – Bars (solid)</i>	<i>2 pieces</i>
* Minimum requirement for training sample should have: <ul style="list-style-type: none"> - Various surface cracks - Subsurface crack. 		

b. Latihan Praktikal Magnetik Partikel Tahap 3

- i. PB perlu menyediakan dan memastikan peralatan seperti berikut dalam keadaan baik dan berfungsi:

No	NOSS Requirement	Ratio	Teaching Method
1.	<i>Casting product samples</i>	1:25	<i>Slide / Video</i>
2.	<i>Forging product samples</i>	1:25	<i>Slide / Video</i>
3.	<i>Rolling product samples</i>	1:25	<i>Slide / Video</i>
4.	<i>Drawing product samples</i>	1:25	<i>Slide / Video</i>
5.	<i>Milling product samples</i>	1:25	<i>Slide / Video</i>
6.	<i>Welding product samples</i>	1:25	<i>Slide / Video</i>
7.	<i>Test pieces showing various defect samples found during fabrication work</i>	1:25	<i>Slide / Video</i>
8.	<i>Test pieces showing various in service defects and failures found after service activities</i>	1:25	<i>Slide / Video</i>

No	Equipment	Ratio
1.	<i>Code and Standard</i>	1:1
2.	<i>Computer</i>	1:25
3.	<i>Printer</i>	1:25
4.	<i>Projector</i>	1:25

2.0 PEPERIKSAAN PRAKTIKAL

a. Peperiksaan Praktikal Magnetik Partikel Tahap 1 dan Tahap 2.

- i. PB perlu menyediakan peralatan seperti berikut dan disahkan oleh Ketua Pemeriksa sebelum peperiksaan dijalankan:

No	<i>Equipment</i>
1.	<i>AC Yoke</i>
2.	<i>DC Yoke</i>
3.	<i>Permanent Yoke</i>
4.	<i>Lux meter / Photometer</i>
5.	<i>Black Light Meter / Radiometer</i>
6.	<i>UV- Alight / Black Light</i>
7.	<i>Dark Room with well ventilated.</i>
8.	<i>Thermometer</i>
9.	<i>Centrifugal Tube</i>
10.	<i>Lifting Weight (9 kg – AC/DC Yoke)</i>
11.	<i>Lifting Weight (18 kg – Permanent Yoke)</i>
12.	<i>Pie Field Indicator</i>
13.	<i>Burmah Castrol Magnetic Field Indicators</i>
14.	<i>Personal Protection Equipment (PPE)</i>

- ii. PB perlu menyediakan bahan guna habis seperti berikut dan disahkan berada dalam keadaan yang baik dan masih belum tamat tarikh luput oleh Ketua Pemeriksa sebelum peperiksaan dijalankan:

No	<i>Consumables</i>
1.	<i>Wet Visible iron particle and Carrier*</i>
2.	<i>Wet Fluorescent iron particle and Carrier*</i>
3.	<i>Dry Iron Powder*</i>
4.	<i>White Contrast (Yoke Technique)*</i>
5.	<i>Cleaner*</i>
6.	<i>Cotton Rags / tissue</i>
7.	<i>Dust mask</i>
8.	<i>Cotton Gloves</i>

b. Peperiksaan Magnetik Partikel (MT) Tahap 3

- i. PB perlu menyediakan dan memastikan peralatan seperti berikut dan disahkan oleh ketua pemeriksa sebelum peperiksaan dijalankan:

No	Kelengkapan Peralatan
1.	Code and Standard