

Magnetic Particle Testing Products



Magnetic Particle Testing (MPT) Unit

MARKTEC offers the most suitable MPT Unit for various applications, ranging from continuous in-line operation system to batch process unit, in compliance with required inspection capability, specification of workpiece to be inspected, line configuration and so forth, conducting flaw detection tests with our demonstration unit.

For semi-finished steel products such as billet, bloom

MARKTEC has designed and manufactured various types of MPT system for this application, and developed state-of-the-art **Fully automatic in-line MPT system** for billet (Super Line-Magna) that detects longitudinal, transverse and corner flaws without human involvement using CCD cameras and image processing unit.

Typical Systems : Fully automatic MPT system (Super Line-Magna) , In-line MPT system (Line-Magna) , Billet Grinding Magna, Axial Electric Current Magnetization MPT system, etc.



Super Line-Magna

For forged and cast parts such as automobile parts

The MPT unit for these parts is installed directly connecting to the production line or off-line. **MARKTEC** selects a suitable inspection method and specification of the unit based on the material/size of workpiece, kind of flaws, required tact time, etc.

Inspection Methods : coil method, axial current method, through conductor method, through flux method, yoke method, etc.

Lineup for Standard Magnetic Particle Testing Unit

1) Horizontal Wet Type Magnetic Particle Testing Unit (Single magnetizing type) SUA series

Features

- Multi-purpose MPT unit
- This unit can be designed and manufactured to meet the international standards (JIS,ISO etc.) .



Standard specification

Type	SUA-35	SUA-66	SUA-138-A	SUA-244-B
Distance between electrodes	350mm	660mm (26inch)	1380mm (54inch)	2440mm (96inch)
Max. magnetizing current	AC1000A · DC500A (single phase half-wave rectification)	AC2500A · DC1500A (single phase half-wave rectification)	AC2500A · DC6000A (3phase full-wave rectification)	
Magnetizing time	0.1 ~ 3.0sec (set by timer)		"0.1 ~ 3.0sec (set by timer)" or "free setting" selectable	
Demagnetizing method	—	—	AC Current attenuation Approx. 5 sec	AC · DC Current attenuation AC : 5sec · DC : 30sec
Coil	150φ Coil as auxiliary		300φ Coil stationary type	
Coil magnetizing power	AC6000AT DC3000AT	AC15000AT DC9000AT	AC15000AT DC36000AT	
Power supply	AC 3phase, 200/220V, 50/60Hz			
	Approx.100A	Approx.150A	Approx.250A	Approx.350A
Unit dimension	W820×D1300×H1340mm	W1400×D1300×H2200mm	W2200×D1300×H2200mm	W3250×D1300×H2200mm
Black-Light	D-10C-2 1set	E-40-2 1set	E-40-2 2sets	E-40-2 3sets

※Magnetizing current value: AC=actual value, DC=average value

2) Horizontal Wet Type Magnetic Particle Testing Unit (Multiple magnetizing type) SUB series



Features

- This unit can inspect surface flaws of all direction simultaneously shifting the magnetizing direction automatically.
- Suitable for inspection of small parts such as automobile parts.

Standard specification

Type	SUB-66
Distance between electrodes	660mm (26inch)
Magnetizing current	AC+AC, AC+DC (single phase half-wave rectification), DC (single phase half-wave rectification) + DC (single phase half-wave rectification)
Max. magnetizing current	AC2500A, DC1500A (single phase half-wave rectification)
Magnetizing time	0.1 ~ 3.0sec (set by timer)
Magnetizing method	Axial current method + Coil method
Demagnetizing method	—
Power supply	AC 3phase, 200/220V, 50/60Hz, Approx.150A
Unit dimension	W1500×D1300×H2200mm
Black-Light	Super-Light E-40-2 (1set)

※Magnetizing current value: AC=actual value, DC=average value.

3) Magnetizing Power Supply Equipment SM series



Single magnetizing current output type

Standard specification

(Single magnetizing current output type)

Type	SMA-2010	SMA-2513	SMA-3060-A	SMA-3060-B
Magnetizing current	AC, DC (single phase half-wave rectification)		AC, DC (3phase full-wave rectification)	
Max. magnetizing current	AC2000A DC1000A	AC2500A DC1300A	AC3000A DC6000A (3phase full-wave rectification)	
Magnetizing time	0.1 ~ 3.0sec (set by timer)		"0.1 ~ 3.0sec (set by timer)" or "free setting" selectable	
Demagnetizing method	—		AC current attenuation Approx.5sec	AC · DC current attenuation AC:5sec · DC:30sec
Power supply	AC 3phase, 200/220V, 50/60Hz			
	Approx.100A	Approx.150A	Approx.300A	Approx.300A
Unit dimension	W300×D500×H400mm	W400×D600×H500mm	W1000×D1000×H1500mm	

(Two magnetizing currents output type)

Type	SMB-2010	SMB-2513
Magnetizing current	AC+AC, AC+DC (single phase half-wave rectification), DC (single phase half-wave rectification) + DC (single phase half-wave rectification)	
Max. magnetizing current	AC2000A, DC1000A (single phase half-wave rectification)	AC2500A, DC1300A (single phase half-wave rectification)
Magnetizing time	0.1 ~ 3.0sec (set by timer)	
Demagnetizing method	—	
Power supply	AC 3phase, 200/220V, 50/60Hz	
	Approx.150A	Approx.250A
Unit dimension	W1000×D600×H1000mm	

※Magnetizing current value: AC=actual value, DC=average value.

4) Demagnetizing Equipment SD series



Through coil method



Electromagnet type

Standard specification

Type	SDA-40-C	SDC-10-E
Demagnetizing method	Through coil method	Three-pole electromagnet type
Demagnetizing current	AC40A (8000AT)	AC10A (4500AT)
Power supply	AC single phase, 200/220V, 50/60Hz, Approx.45A	AC 3phase, 200/220V, 50/60Hz, Approx.15A
Unit dimension	D200×W600×H600 (through hole 300square)	D350×W350×H300mm

※Transfer conveyer is an option.

※Two-pole electromagnet type is also available.

Relating Products

Ultraviolet Light (Black-Light)

D-10C-2 (Portable type)
D-40-2/E-40-2 (Stationary type)



UV Light Intensity Tester

UV-2500 II (Analog type)
UV-2500 III (Digital type)

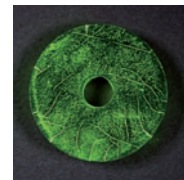


Magnetic Field Tester

HTM-2M (Analog type)
JTM-2000D (Digital type)



Test Specimen (JIS, AMS, ISO etc.)



Sedimentation Meter (ASTM)

**Checkup/
Calibration/
Maintenance
Service**

Condition of MPT unit has much effect on reliability of inspection accuracy.

MARKTEC provides checkup, calibration and maintenance service for MPT unit so that the unit may maintain proper inspection performance.

Integrated supplier of Non-Destructive Testing and Marking

 **MARKTEC** Corporation

Head Office

17-35, Omori Nishi 4-chome, Ota-ku, Tokyo 143-0015 Japan
Tel: +81-3-3762-4451 Fax: +81-3-3764-4337
URL: <http://www.marktec.co.jp/>

☞ All specifications and designing are subject to change without notice.