

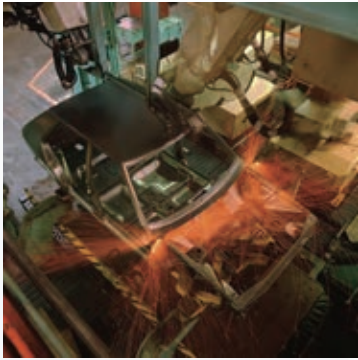
NON-DESTRUCTIVE TESTING



MARKING



BUSINESS CONCEPT



Automobile



Steel



Shipbuilding

Marktec Corporation is a R&D oriented company, related to NDT materials/equipment business through the brand names "Super-Check", "Super-Glo", "Super-Magna", "Super-Light" etc. and Marking machine/consumables business which enables automated marking for everything in the production lines.

From sporting goods and automobiles for daily life to materials and products ranging from industrial robots and cutting-edge products related to space development, we are expanding our activities to diverse industrial fields, greatly contributing to their development.



Ceramics



Aerospace



Aviation



Oil & Gas



MARKTEC

NON-DESTRUCTIVE TESTING

Non-destructive Testing

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MARKING



Liquid Penetrant Testing Materials

Visible Dye Penetrant Super-Check • Eco-Check

Used for detecting defects open to the surface of metals and nonmetals, and three-component product consisting of penetrant (P), remover (R) and developer (D). Organic solvent poisoning preventive control-free and environmental- friendly products are available.

Specification

Compliant with or conforming to JIS (ISO) and ASME

Application

Steel • Metal, Transportation Machinery, Electricity • Gas • Oil • Chemical Plant, Machinery and parts, Mass Transportation, etc.

Super-Check Product List

General Purpose	U-ST series
Low halogen/low sulfur	U-T series
Water washable	UP-G III • N II etc
Non-inflammable	U-NU • H series

Eco-Check Product List

General Purpose	E-ST Series
Low halogen/low sulfur	E-T Series
Water washable	EP-W (J)



Super-Check



 Eco-Check

Fluorescent Dye Penetrant Super-Glo • Eco-Glo

Basically the same as dye penetrant flaw detecting materials, except that an ultraviolet detection light (Black-Light) is used for inspection at the end of the line. Certified to aircraft manufacturer specifications and environmental- friendly products are available.

Specification

Compliant with or conforming to JIS (ISO) ,AMS and aircraft manufacturer specifications

Application

Steel • Metal, Transportation Machinery, Electricity • Gas • Oil • Chemical Plant, Machinery and parts, Electric, Electronics, etc.

Super-Glo Product List

Penetrant

General purpose (Water washable)	OD-20S, OD-2800N
Precision testing (Water washable)	OD-2800 II , III
Low halogen/low sulfur	OD-2800T
Exclusive remover for PT Unit	RP-2000C

Developer

Dry	DN-600P
Non-aqueous	DN-600S
Aqueous	DN-905D

AMS qualified, for aircraft

Penetrant : P series, Developer : D series
Emulsifier : E series • R series, Remover : S series

Eco-Glo Product List

Penetrant

General purpose (Water washable)	EG-2000
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Super-Glo



 Eco-Glo

Magnetic Particle Testing Materials

Super-Magna • Eco-Magna

Two types are available - fluorescent and non-fluorescent magnetic particles - for use in such a way that ferromagnetic material under inspection is magnetized and defect on or close to its surface is detected. Wide-ranging product line also includes environmental-friendly products and concentrated types that need nothing but water to dilute into suspension.

Specification

Conforms to AMS

Application

Steel·Metal, Transportation Machinery, Electric·Gas·Oil·Chemical Plant, Machinery and parts, Electric Appliances, etc.

Super-Magna Product List

Fluorescent Magnetic Particle

General purpose (Materials, Machined parts)	LY-10 (for water)
High brightness/Automatic testing	LY-20 (for water)
Precision testing	LY-30 (for water)
General purpose (Materials)	LY-40 (for water)
General purpose (Materials, Machined parts)	LY-50 (for oil)

Fluorescent Magnetic Particle Aerosol

Oil based	LY-10 sol (oil)
Water based	LY-10 sol (water)
Rapid dry	LY-10 sol (rapid dry)

Non-Fluorescent Magnetic Particle

For Dry usage	WD-55 (White)
	WD-104 (White)
	RD-203 (Red)
For Wet usage	BW-334 (Black)

Eco-Magna Product List

Concentrated Fluorescent Magnetic Particle Suspension

General purpose (Materials, Machined parts)	LY-10 Conc.
High brightness/Automatic testing	LY-20 Conc.
Precision testing	LY-30 Conc.
General purpose (Materials)	LY-40 Conc.



Super-Magna /  Eco-Magna



 Eco-Magna LY-Conc.

Conditioning agent Super-Magna • Eco-Magna


Conditioning agents are used when it is necessary to increase wettability of material surface with particle suspension or uniformize particle dispersion.

Product List

Water conditioner (Liquid type)	EC-4 (Eco Type), BC-700
Oil conditioner	SO-220B, SO-220C
Inhibitor	AR-100K

Specification
Conforms to AMS



 Eco-Magna EC-4

Penetrant Testing Unit

Penetrant testing units consist of multiple liquid tanks, rinsing chamber, drying chamber, developing unit, inspection station, etc. We design and manufacture not only standard equipment but also custom equipment with options such as an automatic conveyor.

Fluorescent Penetrant Inspection Unit MA

■ FEATURES

- Mass inspection of aircraft parts, etc. is possible to efficiently carry out with limited manpower.
- Three types of standard units are available for choice to the size of product to be inspected.
- Optional types are available, designed and manufactured to customers' purposes.



No-Draining Fluorescent Penetrant Inspection Unit MH-1

■ FEATURES

- Drainage facilities are not necessary.
- Process ability of test line improves remarkably, without dry process bottlenecking.
- Economical because cleaning solvent is recyclable.
- Optional systems are available, custom-designed and built to customer's products to be inspected.



Booth Type Fluorescent Penetrant Inspection Unit

■ FEATURES

- Ideal for inspection of large machine parts and machined products.
- Spray gun for penetration treatment, washing treatment and development processing.
- Use Handy Black Light for observation.



Penetrant Inspection Waste Liquid Treatment Device



UF Film Waste Water Processing Unit

- Since it does not use chemicals, sludge processing is unnecessary
- Space-saving design; automatic operation is possible

Cleaning Apparatus (Etching Apparatus)



Penetration Inspection Pretreatment Device

- Compatible with metal parts for Aerospace Industry.
- Acid cleaning and alkaline degreasing cleaning are also supported.
- Wash water recycling device included.
- We can propose exhaust gas scrubbing equipment.

Magnetic Particle Testing Unit

Composed of a magnetizer, magnetizing power supply, magnetic particle suspension spraying equipment, inspection station, etc. Equipment designed and manufactured to different shapes, materials and uses of product to be inspected are available for extensive applications from steel billet to automobile part.

Magnetic Particle Inspection system for Steel Billet to be installed on the roller table Line-Magna / Billet Grinding Magna

■ FEATURES

- Magnetic particle testing unit for use in square billet production lines
- Billet Grinding Magna is used in combination with a magnetic particle testing unit and a scratch removal unit



Line-Magna



Billet Grinding Magna

Full Automatic MPT System for Steel Billet (Super Line-Magna)

■ FEATURES

- Full automatic magnetic particle testing unit for square billets
- In combination with image processing, automatically carries out defect detection and admission decision



Standard type Magnetic Particle Testing Unit

■ FEATURES

- Magnetization by axial current method, coil method.
- Demagnetizing function provided.
- Integrated with high-intensity Black-Light.



Hand-Magna



NC-2Y

- Energy-saving and available in six types, depending on purpose

Tesla-Meter



HTM-2M

- Analog : HTM-2M (0-2mT/0-4mT)
- Digital : JTM-2000D (0-20mT/0-200mT)

Test-Panel



ISO reference block type1

- Specified by JIS, AMS and ISO standards.
- Used for checking magnetizing direction, intensity, etc.

Magnetic Particle Testing Unit

Full Automatic MPT system for automobile parts



■ FEATURES

- Using an image processing system specialized for magnetic particle inspections to quantify acceptance / rejection criteria and prevent human error.
- We can propose the best combination of inspection method, unit, black light, and inspection agent to meet your needs.

Eddy Current Testing Unit

Designed to generate an AC field on the surface of metal and detect field changes caused by flaws. In addition to standard unit with Θ -probe, optional versions designed to suit work to be inspected are available.

CB Bore Eddy Current Testing Unit



Best suited for detection of flaws developed between bores in cylinder block (CB).

Pipe End Eddy Current Testing Unit



Best suited for detecting metal surface defects of pipe, etc.

UT/MLFT Unit

Inspection equipment suitable for inspection on steel refining line. By using a combination of the two devices, it is possible to simultaneously inspect the surface and inside of the inspection object.

Ultrasonic Test Instrument



It is a device that inspects metallic materials and resins using ultrasonic waves, detect the surface and internal flaws measure the dimensions such as thickness. Data processing according to various standards such as JIS and API image processing of visualization are also possible.

Magnetic Leakage Flux Test Unit



Apparatus that detect flaws by detecting the magnetic flux leaked from flaws on the surface by magnetizing the metal. Ideal for high speed, fully automated surface flaw detection with refining line.

Ultraviolet rays searchlight

Super-Light (Portable type)



	D-10L	D-10LS	C-10LB
Features	General type	For Aerospace	Battery type
Standard	JIS Z 2323	ASTM E3022 JIS Z 2323	JIS Z 2323
UV intensity	Over 4,050 μ W/cm ² (at 381mm from filter)	Over 2,400 μ W/cm ² (at 381mm from filter)	Over 4,000 μ W/cm ² (at 381mm from filter)
Dimension/ weight	ϕ 110 × 135Lmm Approx 0.5kg	ϕ 110 × 135Lmm Approx 0.6kg	155W × 80D × 180H mm Approx 0.6kg (Battery included)
Stabilizer case	266W × 166D × 220H mm Approx 2.0kg	266W × 166D × 220H mm Approx 2.0kg	—

"Halation cut filter" that prevent visible light reflection from specimen observation surface can be equipped.
(Except some models)

Digital UV Light Intensity Tester



Digital UV Light Intensity Tester UV-2500 III
Standard JIS Z 2323
Wavelength range to be measured 360 ± 20nm Mainly Area A UV
UV irradiance measurement range 0 ~ 15,000 μ W/cm ²
Dimension/weight 121 × 167 × 35mm Approx 0.45kg

Super-Light (Stationary type)



	D-40L	E-40L	ML-7	E-150 ^{*1}
Features	Wide area irradiation	Concentrated light distribution	Long scale light distribution	Ultra-high strength (No dark curtain required)
Standard	JIS Z 2323	JIS Z 2323	JIS Z 2323	—
UV intensity	Over 3,600 μ W/cm ² (at 600mm from filter)	Over 6,300 μ W/cm ² (at 600mm from filter)	Over 4,000 μ W/cm ² (at 600mm from filter)	Over 8,400 μ W/cm ² (at 600mm from filter)
Power consumption	100W	70W	Lower than 100W	Max 1.2KW
UV light source	UV-LED : 10	UV-LED : 5	UV-LED : 3	Metal halide lamp : 1
Lamp body dimension	695W × 350D × 270H mm Approx 15.0kg	344W × 384D × 270H mm Approx 7.5kg	592W × 209D × 270H mm Approx 8.0kg	420W × 315D × 235H mm Approx 15.0kg
Dimming function	Separate type	Main body integrated	Main body integrated	Separate type

"Halation cut filter" that prevent visible light reflection from specimen observation surface can be equipped.
(Except some models)

*1 This product is a metal halide type.

Related Products (Chemical Products)

Degreasing solvent Cleaner

Highly safe industrial cleaners free of organic solvent poisoning preventive control. Capable of quickly removing grease and oil deposits from machines, parts and materials.

■ Super-Clean Product List

- ST : Low viscosity allows for good penetration and efficient cleaning of narrow spaces.
(Products with low halogen and low sulfur are available.)
- MT : Dipping type product is also available for slow-drying.
- BP-3 : Exclusive remover for No-Draining PT Unit.

■ Parts-Cleaner Product List

- FT · J : Large & economical size product (840 type) with increased volume.



Super Clean ST

Parts-Cleaner FT

Black Magnetic Powder & Contrast Paint - White

■ FEATURES

- It is nonfluorescent magnetic particles application for field test without ultraviolet light, 450cc aerosol type.



Anti-Spatter Agent / Water-Soluble Cutting Oil

■ FEATURES (Anti-Spatter Agent)

- Apply Anti-Spatter Agent before welding process for remove spatter easily.

■ FEATURE (Water-Soluble Cutting Oil)

- Water soluble type, superiority for cooling, penetrative capability, effect to restraining wear of machine tool.
- Not easy to corruption, prevent bad smell and clogging drain hose.



Related Products (Mechanical Products)

Magnetic Particle Inspection Liquid Evaluation Unit

This unit continuously monitors the state of the magnetic particle inspection liquid and displays the detectability level numerically. By continuously monitoring the liquid, which is conventionally managed by humans, the unit helps to stabilize inspections, save labor, prevent human error, and enable full automation in the future.

■ FEATURES

- The effects of concentration changes against the reference concentration set to "10" and scale contamination are continuously and quantitatively monitored to show the detectability level of the liquid.
- Various settings can be made from the touch panel of the unit
- The detectability level log data is recorded in the SD card built into the unit.



Related Products (Inspection Apparatuses)

X-ray Inspection System



COMET YXLON UX-20

■ FEATURES

- UNIVERSAL X-RAY AND CT INSPECTION SYSTEM.
- X-ray Tube: 160-225kV type
- Detector: Flat Panel Detector (Size: 230 × 230mm / 430 × 430mm)
- Max. product size: ϕ 710 × 1,090mm (FPD size 230 × 230mm)

X-ray Inspection System



COMET YXLON UX-50

■ FEATURES

- High energy X-ray and CT system.
- X-ray Tube: 450kV type
- New line detector array (LDA)
- Large, high-sensitivity and resolution flat panel detector (FPD) (Max product size ϕ 660mm × 850mm)

Ultrasonic Test Instrument



UI-27

■ FEATURES

- Multi-purpose, from R type to automatic testing and special uses
- Equipped with 12 types of frequency band filters

Ultrasonic Test Instrument



UI-S9

■ FEATURES

- JSNDI functions are standard.
- Equipped with High brightness LED.
- High dust and water resistance. (Compliant with IP66 type.)
- Intuitive operation with direct keys.

Hardness Tester



EQUOTIP550

■ FEATURES

- Products meet ASTM standards.
- Available for easy conversion to every hardness scales.
- Eco-friendly charge method is adopted.

Hardness Tester (portable type)



MTH-1000L

■ FEATURES

- Conversion to every hardness scale is possible. (HS, HRC, HV, HB)
- Memory function is equipped, and the data can be transferred by USB.
- Select from various language and can be use worldwide.



Character Marking Equipment

Paint marking equipment is useful in eliminating human errors, saving labor, improving working environment and reducing running cost. A variety of marking equipments from standard to optional are designed and manufactured.

Standard Model

Paint Jet Printer PJ-1B

■ FEATURES

- Automatic Marking System
- Capable of marking characters on small-diameter pipes and small-size sections
- Marking speed (MAX : 276m/min (type-0))
- Non-flammable and Flammable special paint
- On-demand system contributing to running cost reduction



● Marking Sample ●



Pump Unit



Controller

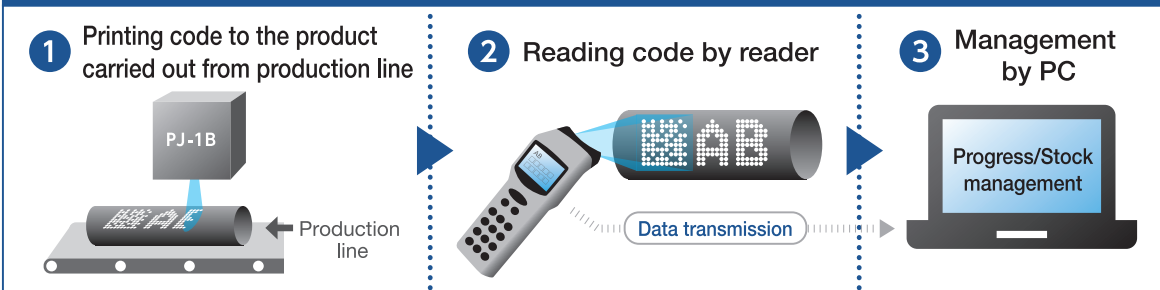


Printing Machine

■ DataMatrix 2D Code Marking

- It is possible to print both flat (plate) and round (pipe) surface.
- It can be used for process control, inventory control and traceability.
- Up to 16 × 48 dots can be printed.

Example of use



Customized System

Steel pipe Inner/Outer Surface Marking Machine



Large Diameter Pipe Inner/Outer Surface Marking Robot



Small/Medium Diameter Pipe Marking Machine



Steel Pipe Marking Machine



● Marking Sample ●

Steel Plate Marking System



Thick plate Marking Machine



● Marking Sample ●

High Resolution Marking Unit



High Resolution Marking Unit



DataMatrix 2D Code



● Marking Sample ●

Identification Marking Equipment

A variety of marking equipment from standard to optical are designed and manufactured to customers' needs - reliability, response speed, marking size and shape.

Shot Marker M-20S • M-30S/ Marking Gun MG-20PS

■ FEATURES

- Use of special marking gun eliminates paint clogging.
- Capable of marking on oil/water wet surface.
- Provided with convenient device to indicate liquid shortage sensor.
- Spot painting saves the paint.
- Marking pattern: Approx. 15mm in diameter
- Air operation type pumps are applied for safety measures



Marking Gun MG-20PS



Shot Marker M-30S

Shot Marker S-10S

■ FEATURES

- Marking width (size) adjustable.
- Marking pattern clear with little paint dispersion.
- Rapid quick drying with atomized air from two-fluid nozzle.
- Environment-friendly spray type capable of marking with little waste of paint.
- Air operation type pumps are applied for safety measures



Marking head

Paint

Dedicated paints for marking/printing equipment. Select paints for printing, marking, special use and eco-product as required.

Eco-color

■ Product List

- | | |
|---------|--|
| PSG | • Dedicated use for printer • More than 5 colors |
| MSG | • For marking equipment • More than 8 colors |
| LSG | • For colored marking • More than 12 colors |
| HT-1000 | • Exclusively for high-temperature marking. |
| | • Water based |
| PMW | • Exclusively for middle-temperature marking. |
| | • Water based, Non-dangerous goods |
| Remover | • G type (Low toxicity • quick drying) |



Eco-color

Stamping Equipment

Micro Impact Stamping Equipment

This is an micro impact stamping equipment designed to operate using a pneumatic vibration stylus. Mainly used for marking automotive parts. Available in stationary and portable types.

■ FEATURES

- Capable of high-grade and high-speed marking
- Best suited for permanent marking on metal and aluminum parts.
- Applicable to casting/machined, uneven and curved surfaces as well
- Suitable for two-dimensional code marking.



Offline Portable Stamping Machine

This is a system for stamping content read with a barcode reader by means of a handy stamping machine. The stamping machine employs an electromagnetic method, and can stamp without the use of air. It is ideal for product identification and management of steel materials.

■ FEATURES

- Incorporates a barcode reader, panel computer, handy stamping machine, and stamping controller on a four-wheeled trolley
- Easy-to-transport, convenient, compact integrated trolley



● Marking Sample ●



Laser Marker

■ FEATURES

- High accuracy and indelible marking
- Best performance for code marking
- Traceability management

Related Products

SUPER MARKER PEN Red · II

■ FEATURES

- Best suited for marking nuclear power equipment and related parts.
- Non-water soluble.
- Content of halogen elements are minute amount.
(Less than 200ppm Chlorine · Fluorine, less than 50ppm sulfur)



MARKTEC PRODUCT GUIDE

Integrated supplier of Non-Destructive Testing and Marking



www.marktec.co.jp

MARKTEC Corporation

Headquarters

17-35, Omori Nishi 4-chome, Ota-ku, Tokyo 143-0015 Japan
Tel. +81-3-3762-4451

East Service Center

17-35, Omori Nishi 4-chome, Ota-ku, Tokyo 143-0015 Japan
Tel. +81-3-3765-1712 (Sales Dept.)
Tel. +81-3-3762-4453 (Overseas Sales & Marketing Dept.)

West Service Center

Daido Seimei Esaka Bldg., 10F
23-101, Esakacho 1-chome, Suita-city, Osaka 564-0063 Japan
Tel. +81-6-4861-3700 (Sales Dept.)

Narita Plant

681-4, Kichioka, Narita-city, Chiba 287-0225 Japan
Tel. +81-476-49-3160

Narita Plant: ISO 9001 / ISO 14001 certified. Sales Div.: ISO 9001 certified.

Overseas Office

Marktec Jakarta Representative Office (Indonesia)

Overseas Subsidiary

Marktec China Corporation (China)
Marktec Korea Corporation (Korea)
Marktec Asia Co.,Ltd./ Marktec Corporation (Thailand) Co.,Ltd. (Thailand)

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Please confirm these beforehand with the person in charge at our company.

* Please be advised that some products in Business line of MARKTEC are not available for the restricted area.

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