Diffusible Hydrogen Analyzer

JDH206



Determination of Diffusible Hydrogen in Welds at 1/1000 mL or Better via GC

Diffusible hydrogen, released from weld metals, is the main reason for cold cracking. As such, the determination of diffusible hydrogen is significant to the industry. The determination method complies with the JIS Z3118, ISO3690, and ANSI/AWS A4.3-93 standards.
As a successor to the GC206, JDH206 continues with the gas chromatography (GC) method that provides higher precision through more user-friendly operations than the glycerin method; meanwhile, JDH206 integrated the separate sampling and GC units of GC206 into a compact design.

● Extremely High Capture Rate of Hydrogen

Enclosed in a chamber, the hydrogen is liberated from the test piece by hot extraction. Purged along with the argon carrier gas, all hydrogen gas is introduced to the GC, free of the residue bubble issue as in the glycerin method.

● Superior Accuracy

No negative errors are introduced due to adsorption or melting, and personal errors are reduced to a minimum.

● User-friendly Operations

With only a press on the start key and a turn of the valve, determination can be performed, free from the complexities of the glycerin method. Operations are focused on the front control panel, compatible with previous JSL sampler models.The power supply allows for AC 100 V to 240 V, requiring no transformer for international use.

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Gas Chromatograph

Determination method	Gas chromatography: JIS Z 3118 ISO3690 ANSI/AWS A4.3-93
Detector	Thermal conductivity detector (TCD)
Oven temperature	40°C
Carrier gas	Ar 300mL/min
Column	SUS 5/6×3m MS-5A 30/46mesh
Calibration gas introduction	Built-in 1 mL sample loop and selective switch
Assay time	<3 min/test piece
Detection limit	0.0005 mL H_2
Flow monitoring	Built-in 500 mL flow meter
Power supply	AC 100 – 240 V, 0.8 kVA
Dimensions	500 mm × 450 mm × 200 mm

Heater

Temperature	45°C or 150°C
Heat-conduction blocks	5 blocks (dedicated to GS-206SH)
Power supply	Low voltage mode: 100–120 V, 0.5 kVA High voltage mode: 190–240 V, 0.5 kVA Selectable via the rear-mounted switch
Dimensions	350 mm × 120 mm × 285 mm

Sampler

Model	GS-206SH or GS-206LH
Chambers	5 chambers in total, 4 for test pieces and 1 for blank
Test piece installation	Screw-in chamber with O-ring seal

Data Processing Device

Model	JSμ7
PC	Laptop or desktop
OS	Windows®11 Professional
Peak identification	H_2
Calibration	Single-point external standard method
Input	2 channels

Standards	Test Piece Size	Sampler
JIS Z 3118	40 × 25 × 12 mm	GS-206SH
ISO3690	30 × 15 × 10 mm	GS-206SH
ANSI/AWS A4.3-93	80 × 25 × 12 mm	GS-206LH

First generation

Model: G-1006





Second and third generations

Model: GC206



Chromatocorder
Discontinued
or

Data processing device JSμ7
- Chromatographic data processing
- Analog-to-digital converter (ADC)
- Calibration and determination

Analog signal output

GC-206
Carrier gas flow controller

GS-206S/GS-206L and GT-206
Sampler and heater

- **High temperature (150°C) sampler**



GC7000
GC
Diffusible hydrogen analyzer

Fourth generation (latest)

Model: JDH206

PC
Laptop or desktop
- Windows OS
- JSμ7software
- Calibration and determination





Data processing device JSμ7
- ADC
- Communication with PC



JDH206
GC
Diffusible hydrogen analyzer

High temperature (150°C) sampler



GS-206SH/GS-206LH and GT-206
Sampler and heater



GT-206
Heater with temperature control

Almost halved the width

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※Specifications, appearance, and accessories are subject to change for improvement without prior notice.
※It is recommended that only genuine JSL products be used for optimal performance.

Ver.1.0