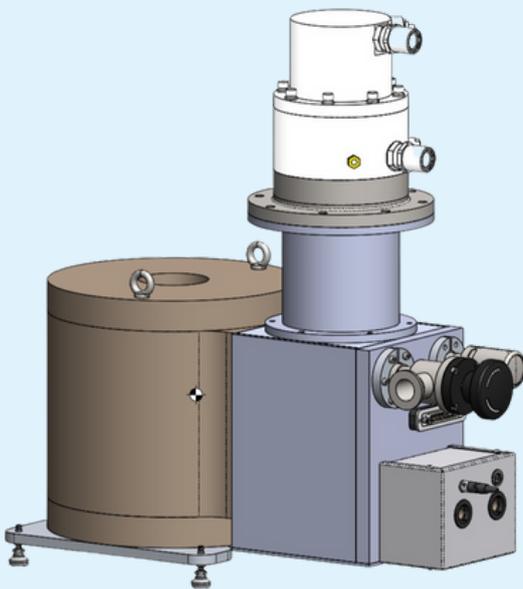


SCM-MAGNETOMETER

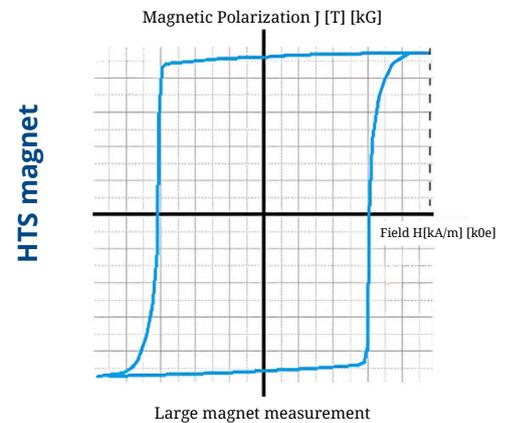
A quick and accurate automatic measurement of magnetization characteristics for high coercivity magnets using a 6 T high-Tc superconducting magnet.

- Cryogen-free
- Fast sweep rate
- Low fringe field
- Large sample capability
- Magnet can be held at any field strength, minimal influence of eddy currents
- Separate helium compressor can be sited 3-10 m away

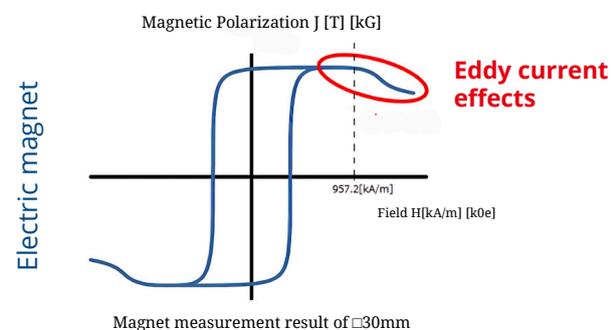
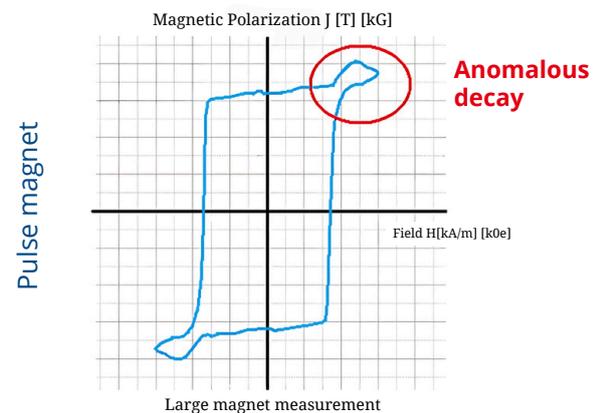


- Superconducting (air-core coil) magnet eliminates pole saturation enabling measurement of high coercivity materials
- A superconducting magnet enables a continuous high static magnetic field, facilitating measurement of large permanent magnet samples due to minimization of eddy current influence.
- No influence of magnetic aftereffects found in pulsed magnetic fields, enabling accurate measurement of processing degradation conditions, etc.
- Equipped with a heater for varying sample temperature, enabling measurement of magnet properties at high temperatures

Measurement with HTS BH curve tracer



Limitations with other systems:



HTS-110 LP
1B Quadrant Drive, Waiwhetu,
Lower Hutt 5010, New Zealand.
TEL: +64 4 570 8880

Nihon Denji Sokki Co., Ltd. (NDK)
8-59-2 Sunagawa-cho, Tachikawa-city,
Tokyo 190-0031 Japan.
TEL: +81 -42-537-3511



SCM-MAGNETOMETER

2G 6T HTS Magnet Specifications

Features

- Maximum field: 6 T. (Note 10 T option available)
- Fast sweep rate: 5 s/T
- Room temperature bore: $\Phi 70$ mm
- Separate helium compressor can be sited 3-10 m away

Field Homogeneity

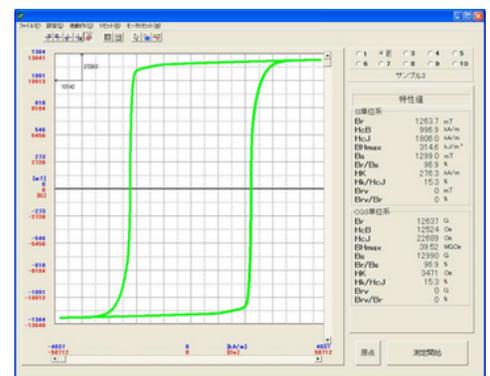
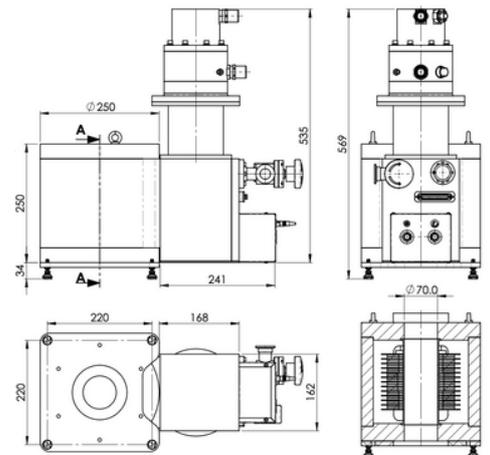
- Volume 1: better than $\pm 0.2\%$ within $D=10$ mm, $L=10$ mm
- Volume 2: better than $\pm 5\%$ within $D=70$ mm, $L=50$ mm

Low Fringe field

- 5 Gauss line within 1.2 m in the magnet axial direction
- 5 Gauss line within 1.0 m in the magnet radial direction

Physical

- Large-sample capability, up to 30 mm square
- Max operating current: 150 A
- Dimensions 550 mm x 250 mm x 570 mm (L x w x h) (including cryocooler and manifold)
- Weight (magnet with cold head, approx.): 60 kg
- Compressor: 96 kg
- Facility input: air and water-cooled compressors available, 4.6-6.4 kW input



SCM-Magnetometer Specifications

Sample	Sample dimensions	Up to $\square 30$ mm
Measuring equipment/software	Measurement accuracy	Within ± 1 [%] of calibration standards (Br, HcJ)
	Measurement Time	Approx. 8 min
	Main measurement items	Residual Magnetic Flux Density - Br
		Coercivity - Hcb/Hcj
		Max. Energy - BHMax
Degree of Orientation (Br/Bs)		
Elevating device (heater)	Temperature range	RT~200 °C
Superconducting Magnet	Central magnetic field	6 T
	Bore diameter	$\phi 70$ mm
	Excitation speed	5 s/T

