VSM Measurement System/ Magnetic Measurement Instrumentation



Features

- High sensitivity (Resolution : 10-4emu)
- Low noise and highly stable system
- Four Measuring Ranges (102, 10, 1, 10-1)
- High speed measurements with precision
- Menu driven easy to use software
- Easy change of sample
- Water cooled electromagnet for increased stability

The Vibrating Sample Magnetometer (VSM) measures the magnetization of a sample of magnetic material under an external magnetic field by converting the dipole field of the sample into an ac electrical signal. A vibrator along with its electronics vibrates the sample with a fixed frequency and stabilized amplitude. The sample is driven to vibrate. Due to changes in flux, voltage proportional to the sample's magnetic moment is induced in the pickup coils. By calibrating this voltage to magnetic moment using calibration standards and measuring the magnetic field, the magnetic moment of the sample can be obtained. The software controls the instrument and measures the magnetic moment. Hysteresis Loop can also be drawn through this software and its parameters calculated.



Note: Specifications are subject to change.

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System Description

1. Magnetic Field System

- Electromagnet (Magnetic field is higher than 0.5T at gap of 25mm in iron cores)
- Dual polarity power supply
- Gauss Meter (Range: 20kGauss to 1Gauss)
- Embedded Magnetic Flux Detector

2. Control System

- Built-in computer systems (with Microsoft Windows)
- "Built-in Software Interface for Collecting and Analyzing the Data "
- (Hysteresis loops can be measured automatically to find the saturation magnetization, coercivity, and remanence of magnetic samples.)
- Built-in Data Acquisition System

3. Others

- Standard Computer with processor and original Windows10 loaded.
- · Keyboard and Mouse
- Calibrations standard samples (99.9% Nickel and HgCo(SCN)₄)



Test Results The different test samples

Sample : RV-1 Weight of Sample : 0.100 gm Saturation Mag. : 437 emu/gm Retentivity : 224.75 emu/gm Coercivity: 1347.5 Gauss (emu) ti Magnetic mom 0 -8000 -6008 -4000 +20 2000 4000 6000 8000 SES Instrument Pvt. Ltd Performer Name : SUNIL BADYAL Date & Time: 9/21/2017 3:06:37 PM Magnetic Field (Gauss)



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