

Vibrating Sample Magnetometer

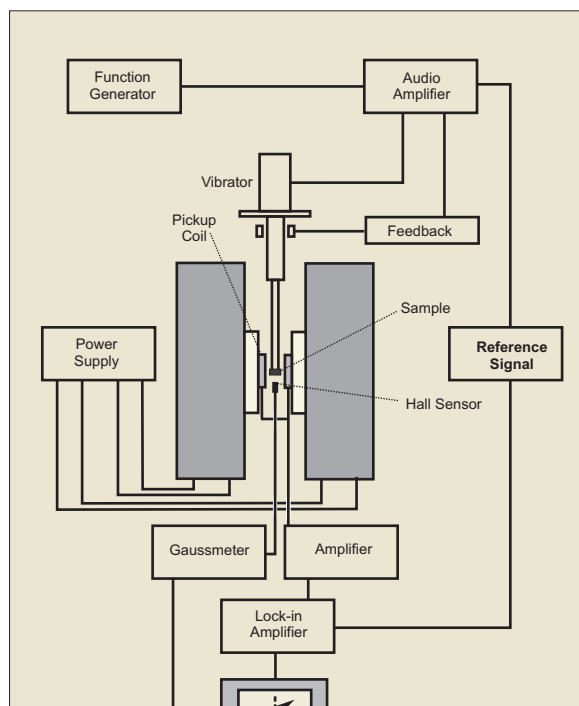
VSM-1000

VSM Measurement System/ Magnetic Measurement Instrumentation



- High sensitivity (Resolution : 10^{-4} emu)
- Four Measuring Ranges (10^2 , 10, 1, 10^{-1})
- Low noise and highly stable system
- High speed measurements with precision
- Menu driven easy to use software
- Easy change of sample
- Water cooled electromagnet for increased stability

The SES 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



System Description

1. Magnetic Field System

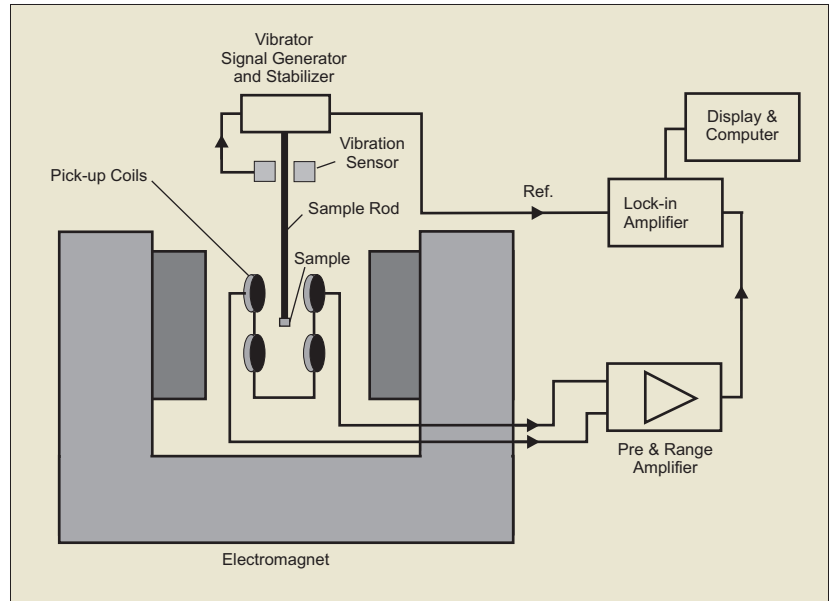
- 1-1. Electromagnet (Magnetic field is higher than 0.5T at gap of 25mm in iron cores)
- 1-2. Dual polarity power supply
- 1-3. Gauss Meter (Range: 20kGauss to 1 Gauss)
- 1-4. Embedded Magnetic Flux Detector

2. Control System

- 2-1. Built-in computer systems (with Microsoft Windows)
- 2-2. "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.)
- 2-3. Built-in Data Acquisition System

3. Others

- 3-1. Standard Laptop Computer with original Windows loaded.
- 3-2. Calibrations standard samples (99.9% Nickel and $\text{HgCo}(\text{SCN})_4$)



Test Results

The different test samples

