HYSTERESIS TYPE CRACK DETECTOR
## (PULSE TYPE)

Introduction: MMRSPN series of hysteresis crack detector are capable for detecting the existing the of micro cracks in hard and soft ferromagnetic magnetic material apart from other material using pulse hysteresis technique. This technique is able to identify the cracks upto 100 micro meter any where in ros ,sheet, blocks etc with any distructive approach.

Features: Programmble range selection of frequency 2. Distinct plot to demarcate between crack and healthy material. Easy to use.

Operating Principle: Soft/hard ferromagnetic material in circular ring, round cake, square, tile and other irregular shapes. under test is placed beneath the controlled low frequency Alternating/D.C. magnetic field. Magnetic field intensity is be measured with Hall magnetometer with high degree of accuracy interface to P.C. Magnetization force is measured with flux meter, which uses different induction coil to measure changeable magnetic flux at different frequency. Finally mag netization force and magnetic field are plotted under varies temperature and other parametric conditions. The slope and area of this b-h Loop establishes the existence of crack and other metallurgical properties of any ferromagnetic material.

$B=;r ;0(H+M)$
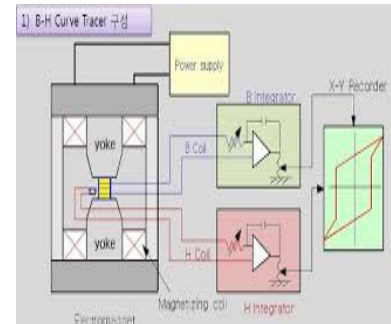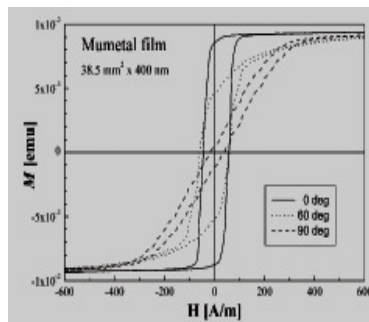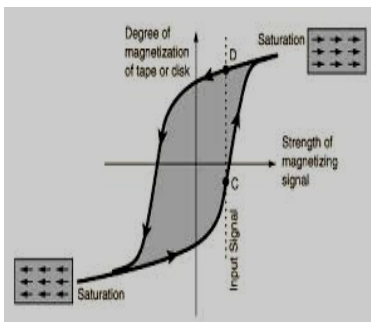
General Specifications of B-H Loop tracer (A.C., /D.C.) 0.0 Hz frequency<10.0 KHz ı

Model	Bmax guass	Frequency Hz(sine/square wave)	Loos/kg	Temperature Deg-cel
MBHLT-50100	+/-5000	5-500	100	400
MBHLT-100100	+/-5000	5-500	200	400
MBHLT-200400	+/-5000	5-500	500	400

General Specifications of crack detector

Operating voltage: 220 volt A.C. ,50HZ.
Measurement range (f):10-09-10-04 ull scale): as above in different model.
Magnetic field :10^{-00}-10^{04} gauss
AT /M: : 10^{-00}-10^{04}
Crack detection depth: upto 100 m.m.
Frequency:5-1000 hz
Duty cycle:0-100%
Differential hardness detection:10% p.u.
Travelling spead: 1.0 meter/min
Sample size: 10-100 m.m.
Operational humidity: 10-100%
Operational temperature: -10 °C to +60 °C
Response time: 1000 sample/sec
Input capacitance: 10 nF
Response time: 1000 sample/sec
Burden: less than 100 micro volt/full scales current or better
Accuracy error: 0.5/1.0/2.0 % reading
Repeatability: 100 of reading
Linearity adjustment: upto 100 count
Input imedence: ultra high (<1000 count burdon
Filtering: low pass (adjustable)
Offset: variable upto 10,000 nano volts (manual/auto)
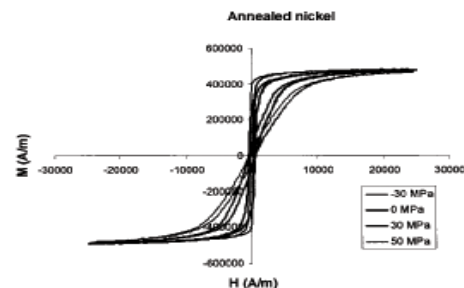CMMR: >80 db at 50-60 Hz
Isolation: > 100 giga ohm
Connector: BNC-9 pinx2 and BNC-25 pinx2
Size: 8X8x12 inches/rack mounted or portable
Interface: RS-232
Option: ADDITIONAL SOFTWARE to plot B/H at different temperature/frequency

B-H plot at different hardness level

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