

Multifect-EX

Multi-frequency Eddy Current Tester for NDE of Components and Materials



Multifect-EX is a fifth-generation versatile multi-frequency, multi-channel, multi-parameter eddy current comparator for segregation of metallic components and raw stock. The system is ideally suited for stringent quality checks of crucial automotive components. Some typical applications are:

- Sorting of bars or components according to alloy type
- Sorting of fasteners according to hardness
- Segregation of forgings as per heat-treat condition
- Evaluation of gudgeon pins for case-depth
- Confidence Testing with known good samples
- Segregation with multiple parameter mixups

Multifect-EX can test parts at up to 32 frequencies at one go. This feature can also help in solving certain problems that cannot be solved at just one frequency. The setup is completely automatic, making the system very easy to operate.

Elliptical thresholds enable more 'natural' grouping, covering the spread in signals due to the inevitable differences in metallurgical properties within a group. Conventional rectangular thresholds are also available for simple single frequency applications.

- Single and multi-frequency tests
- Multi-parameter multi-frequency tests
- Confidence tests with a wide frequency band
- Elliptical and rectangular thresholds
- Automatic setup wizards
- Automatic sorting
- Windows operating system
- Online manual and context sensitive help
- Extensive Data logging and reporting
- TCP/IP servers over Ethernet



Gate Sorter



TECHNOFOUR

THE NDT TECHNOCRATS

MULTIFECT-EX TECHNICAL DATA

Frequency Range

10 Hz to 1MHz

Multiplexed operation

Up to 32 time-slots with 32 frequencies

Signal Gain

0 dB to 86 dB in steps of 0.5 dB

Phase

0 deg to 359 deg in steps of 1 deg

Thresholds

Rectangular: Two vertical, two horizontal

Elliptical: Up to nine elliptical thresholds

Part-in detection / Test trigger

Automatic or external

Tests available

Single frequency sorting

Multi-frequency sorting

Confidence testing

Data Storage

Hard Disk, USB key

Operating System

Windows

Connectivity

TCP/IP over Ethernet

Setup

Manual and Automatic

Screen

LCD

Digital Outputs

GO/NO-GO and group status

Test Automation

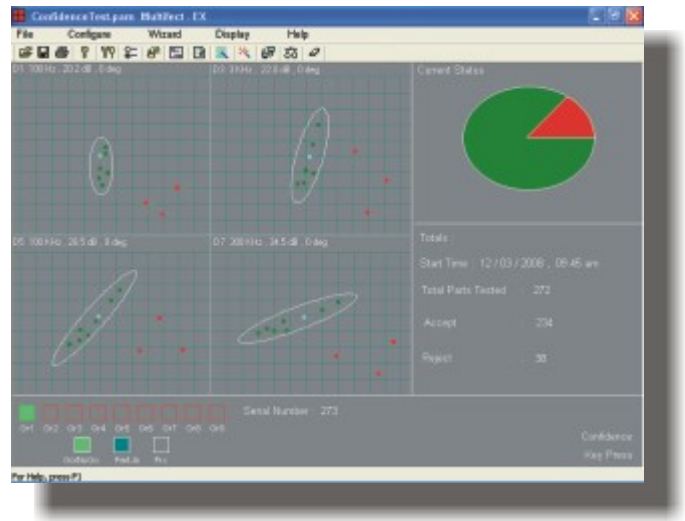
External PLC

Data Security

Admin/User level password protection

Test Coils

Rectangular, circular, Probes, custom-built



Multifect-EX displays are quite configurable. This screen shows a typical confidence test. Other displays can show tests at one or 32 frequencies at a time. Stored results can also be replayed.

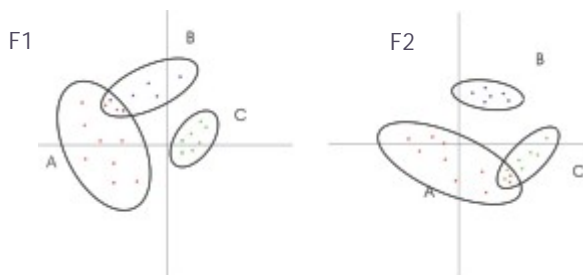
Versatile Workhorse

Multi-frequency test

For complex group sorting where no single frequency is able to segregate mixups of more than two groups.

Confidence test

When just a bunch of acceptable parts is available, the system can set up a confidence test at several frequencies over a wide range. The system then works out tight thresholds at each frequency and tests each part at all those frequencies at a single go. Any outliers are rejected.



Groups A and B are ambiguous at frequency F1, as are A and C at F2. The system uses data at several frequencies to sort in such cases.



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Technofour can offer standard or custom automation solutions for sorting components or materials.