



ENGINEERED
INSPECTION
SERVICES, Inc.

P.O. BOX 40 / 3259 CORAL RIDGE ROAD / BROOKS, KY. 40109 USA

502/955-9021
1-800-595-1332
FAX 502/955-7589

Same as 1995

VERITEST 1.4 *4*

INSTRUCTION MANUAL

Table of Contents

APPLICATION	1
UNIQUE FEATURES	1
EQUIPMENT DESCRIPTION	2
CONTROLS AND CONNECTORS FOR TESTING PURPOSES	4
A. Front Panel	4
1. Detector Module	4
2. Counter Module	5
3. Scope Module	6
4. S P M Module	7
B. Rear Connector Panel (RCP):	8
PRINCIPLES OF OPERATION	9
FREQUENCY	10
PHASE	12
SENSITIVITY	12
COILS AND HANDLING	12
The Reference Coil:	14
The Test Coil:	15
S P M MODULE	15
INSTALLATION	20
VERITEST SET-UP	21
MAINTENANCE	31

*Effective 15 April 1995

Table of Figures

Veritest Front Panel	3
Coils and Probes	3
Detector Module	4
Counter Module	5
Scope Module	6
S P M Module	8
Veritest Rear Connector Panel	9
V Trough	14
Tube	14
Rectangular Track	14
Oscilloscope Screen	16
Scope Dimensions/Thresholds	16
Amplitude Diagram	17
Mode A Configuration	17
Phase/Amplitude Diagram A	18
Mode B Configuration	18
Phase/Amplitude Diagram B	18
Mode C Configuration	18
Phase/Amplitude Diagram C	19
Mode T Configuration	19
Phase Diagram	19
Mode P Configuration	19
Typical Sorting Configuration	20
Set-up, Positioning Controls	21
Set-up, Balance Controls	22
Set-up, Reference & Test Coils	22

Phase Adjustment 23

Separation of Part Signals 24

Gate and Test Coil Set-up 25

Mode Failure Troubleshooting Chart 27

Overall View, Veritest Front Panels (Detailed) 28

Overall View, Veritest Rear Connector Panel (Enlarged) ... 29

G-3 Gate Assembly Maintenance Chart 33

* Effective 15 April 1995

The Engineered Inspection Services' Veritest is an extremely versatile instrument which offers high-speed nondestructive separation capabilities based on eddy current technology. The machine is easily set up and operated.

APPLICATION

The Veritest is designed to sort or separate magnetic or non-magnetic parts into either two or three groups, dependent on the initial set-up of the inspection. These groups can be differences in metallic grades, hardness, case depth, grain size, or plating thickness as well as variations in processing, geometry, or chemistry. Because the equipment is both frequency and phase selective, the important variable which needs to be inspected can be detected in most cases despite the presence of other inconsequential variables.

When accompanied by suitable mechanical handling systems, the Veritest is an ideal component of an automated inspection line because of its inherent stability and high speed capabilities.

UNIQUE FEATURES

1. Infinitely variable phase and frequency selection is provided to maximize separation capabilities, enabling:
 - a. A better separation in phase of signals indicating defects and those which may simply indicate variations within the good parts
 - b. An arbitrary choice of depth of frequency penetration so that the proper area of the part can be inspected for the defect being sought
2. The broad frequency range (from 100 Hz to 20 KHz) allows application to both magnetic and non-magnetic materials.
3. The unit is highly sensitive at all frequencies, with a relatively low inherent noise level.