E-1559

ANNEXURE-I

Specifications

Range

0.040" to 480" (1 to 12,192 mm) at steel velocity; range selectable in fixed steps or continuously variable

Material Velocity

Continuously adjustable from .0098 to .6299 inches/microsecond (250 to 16,000 m/second); 65 selectable material velocities

Display Delay

-20 to 3498 microseconds in steel (dependent on range)

Probe Delay/Zero Offset

0 to 999.9 microseconds

Gain

0 to 110 dB adjustable in selectable steps 0.1, 0.5, 1.0, 2.0, 6.0, user definable, and locked

Test Modes

Pulse echo, dual, and thru-transmission

Pulser

Spike/excitation pulse

Pulse Repetition Frequency

Autolow, autohigh, manually adjustable from 15 to 2000 Hz in 5 Hz increments, external trigger

Pulser Energy

Low, high

Damping

50, 75, 150, 1000 ohms

Bandwidth (amplifier bandpass)

0.25 to 25 MHz with 10 selectable settings including broadband

Gate Monitors

Two independent flaw gates controllable over entire sweep range

Measurement Modes

Zero-to-first, multi-echo with selectable flank or peak detection

Rectification

Positive halfwave, negative halfwave, fullwave, RF

Reject (suppression)

0 to 80% linear

Units

Inch, millimeter, or microsecond selectable

Operating Temperature

0 to 55° C (32 to 130° F); -25 to 70 ° C (-13 to 158°F) storable

Languages

Selectable English, German, French, [illegible]

Probe Connectors

BNC or Lemo selectable at order

Keypad

International symbols

Battery Power

Lithium Ion Battery Pack (optional D-size NiMH batteries)

Battery Life

Up to 8 hours on Lithium Ion Battery Pack

Size (Approximate)

11.1" W x 5.9" H x 6.25"D (282 x 150 x 159 mm)

Weight (Approximate)

6.3 lbs. (2.9 kg) with Li-Ion battery; 3.3 lbs. (1.5 kg) without battery

Warranty

2 year

Weld Rating Calculation

Simplifies the rating of weld indications according to AWS specification D1.1 (formula D=A-B-C)

Outputs

TTL Go/NoGo

Three independently assignable outputs; instantaneous, timed, latched with visual LED and audible horn alarms

Analog

Four independently assignable outputs

Amplitude

0 to 100% full screen ht. directly corresponds to 0 to 2.5V

Thickness (TOF)

0V corresponds to the value on the left side of the screen or display delay; 2.5V corresponds to the value on the right side of the screen or range

I/O Port

Bi-directional RS232, baud rate selectable up to 115, 200, direct reports to printers (including HP DeskJet & LaserJet parallel printers)

Color Transflective LCD Display

Display

5.6" X 3.1" (143 x 79 mm), 400 x 240 pixels, brightness control, 4 color schemes, 8 A-scan colors

A-scan Size

220 x 200 pixels in normal mode, 220 x 100 in ½ screen mode, 320 x 200 in zoom mode

A-scan Update Rate

60 Hz, single shot

A-scan Waveform Selections

Hollow, filled, smart hollow, smart filled

A-scan Enhance Mode

Sparkle, baseline break

Dedicated Key Functions

Test

Displays the test menu, coarse range markers, then display delay & range under the A-scan upon successive key presses

Backlight

Illuminates the backlight for indoor use or use in poor lighting conditions

Lock

Deactivates the two rotary knobs to prevent inadvertent changes

Home (2)

Returns instrument to main menu

Question Mark

Displays help text for the four active parameters along right side of display

Freeze

Freezes the displayed A-scan image according to the setting for the freeze mode in the configuration menu (all, peak std., compare, (envelope peak).

Copy

Sends information to the on-board datalogger or I/O port

Zoom

Expands A-Scan display area for increased screen resolution

dB Step

Selects gain increments

Magnify

Expands area within selected gate for increased A-Scan resolution

Data Storage & Documentation

Memory

Minimum 225 datasets store all instrument operating parameters plus A-scan; stored datasets can be easily previewed and recalled for quick, repeatable instrument setup

Memory Retention

2 years

Alphanumeric Thickness Datalogger

Up to 99,999 thickness readings with up to 6 (16-character) user defined Notes per reading can be stored in three flexible, powerful file structures. 14-character file names with easy file navigation and viewing of both the A-Scan and thickness data provided by ½ screen testing mode. Thickness readings can be stored, viewed, cleared, or output directly to a printer.

Thickness File Structures

Linear (sequential), Grid (702 x 702), Custom-Linear with auto label capability

Alphanumeric Input

Quick & easy using two rotary knobs

Inspection Memo, Notes, Header

User definable memo (up to 252 characters), header (nine 16-character lines), & 6 (16-character) thickness reading notes to further document inspection conditions on a per file basis

File Preview

Scroll to preview stored A-scan & file header fields to easily select the proper file for recall

Options

DAC/TCG – 362

Multiple Curve DAC (Distance Amplitude Curve)/TCG (Time Corrected Gain) for echo amplitude adjustment and evaluation, 40 dB dynamic range, 12 dB/ microsecond slope, record up to 16 points, recorded points are individually editable, new points can be inserted.
Display four additional curves based upon dB offset feature from originally recorded DAC curve. TCG attenuation and transfer correction features enable use on other materials and surface conditions.

IF-363 (Interface) Gate Option

For automatic start of the display, Gates A or B, and/or DAC/TCG for immersion testing applications where the water to top surface of the part varies

BEA-365 Backwall Echo Attenuator Option
DGS-364 DGS Option
VGA-213 VGA Output Option

RF-212 Output Option