

**ScanMaster**

# Industrial Ultrasonic Scanning Systems for ERW Pipe

*AS-200e* ULTRASONIC WELD INSPECTOR



- *Automatic scanning*
- *High speed*
- *High resolution*
- *Up to 32 channels*

# AS-200e ULTRASONIC WELD INSPECTOR

## PRODUCT DESCRIPTION

<b>Introducing the AS-200e series</b>	The <b>AS-200e</b> Series 'Weld Inspector' is intended for high-speed ultrasonic inspection of longitudinal electrical resistance welded (ERW) pipe. Systems may either be installed on-line directly after the welding head for quality control or offline for final evaluation of the product and quality assurance.
<b>Mechanics</b>	The mechanics may include a gantry or column supported multi-channel scan head with joint or individual probe activation. A wide degree of freedom is left for the user to design the coverage and inspection scheme. Known modes such as the "I", "K" and "X" transmission modes are supported.
<b>Ultrasonic transducers</b>	The RSA type probes, usually supplied with the system are available in a wide variety of beam angles, such as 45°, 60°, 70°, as well as costumed angles, with 2-5 MHz frequency. Different probes are used for the high temperature (online) and high resolution (offline) systems. For the inspection of the HAZ after the weld immersion probes with a squirter water jet are used, while for offline systems dual element contact probes to be preferred. Monitoring of the thickness of the weld flash is also supported by specially manufactured, single-element longitudinal wave probes.
<b>Ultrasonic hardware and software</b>	Inspection electronics comprise a <b>usc-100</b> ultrasonic computer, including up to 32 channels. Each channel is programmed with one to four signal gates and one or two alarm thresholds per gate. ScanMaster <b>AS-200</b> production line software with the built-in AND/OR/NOR flaw classification utility provides for on-line flaw detection and evaluation.
<b>Output Interface</b>	A standard digital input-output of up to 8 channels is provided for the connection to external device such as paint marking, alarms, part sorters etc. Outputs can be triggered according to ultrasonic events, while inputs can receive signals from automation systems for activation of scan sequences.
<b>System set-up procedure</b>	Ultrasonic and scan set-up files are each separately saved and are recallable by geometric parameters at any time. All setups are saved on the hard-disk and can be backed up at any time on sustainable media with literally no limitation to the number of saved setups.
<b>Remote communication</b>	A specially designed module interfaces the <b>AS-200</b> application to the plants computer network, receiving data of the product or batch to be scanned and allowing the batch to be scanned with minimal operator intervention.
<b>Test Reports</b>	Reports are automatically generated, displayed and printed at the end of each scan. Reporting can include graphical formats as well as alpha-numeric listing of the defects in each scanned part, their geometrical data, type and locations. The general data, as received from the network or fed by the operator is also displayed, with fields available for operator defined inputs.

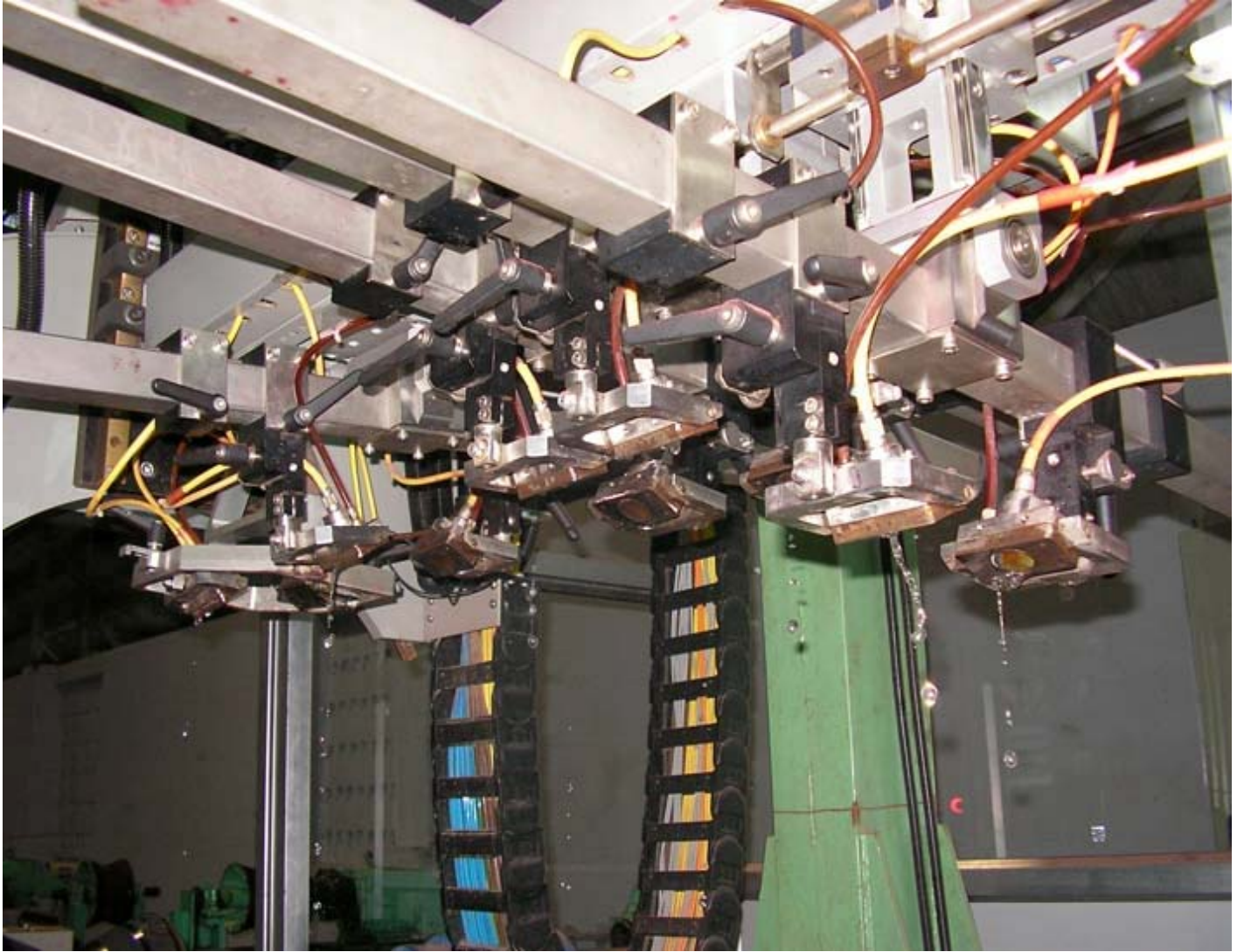
# AS-200e ULTRASONIC WELD INSPECTOR

## SYSTEM PERFORMANCE

<b>Dimension range</b>	From 100mm (4" in) in diameter and from 3mm (0.12") in wall thickness.
<b>Inspection technique</b>	Contact-type fitted in holders, including hardened, replaceable wear shoes, longitudinal wave inspection by immersion transducers with squirter jet couplant dispensing.
<b>Number of inspection channels</b>	Up to 32 channels as per inspection specification. One to four programmable signal gates per channel, with one or two operator-selected threshold levels per gate.
<b>Transducers</b>	RSA type shear wave probes, 2, 2.25, 4 and 5MHz. Selection of 45°, 60° and 70° angle of propagation (in steel) for each channel. Elevated temperature (ET) option for on-line inspection.
<b>Inspection coverage</b>	100% of weld volume, dependent on number of probes and inspection frequency for each wall thickness and pipe diameter.
<b>Inspection resolution</b>	1mm (0.04") along weld line.
<b>Flaw detection</b>	Flaw detection to API Spec. 5L and 5CT, or as otherwise specified by the customer.
<b>Inspection (feed) rates</b>	Linear surface speeds up to 1000mm/sec (40in/sec), dependent on external conveyor.



# AS-200e ULTRASONIC WELD INSPECTOR



\* Specifications are subject to change without notice.

## Corporate Offices

### ScanMaster Systems (IRT), Ltd.

5B Ha'Nagar St., Neve Ne'eman B  
Hod Ha'Sharon 45800, Israel  
Phone: 972-9-7475400  
Fax: 972-9-7475444  
e-mail: [sales@scanmaster-irt.com](mailto:sales@scanmaster-irt.com)  
Web site: [www.scanmaster-irt.com](http://www.scanmaster-irt.com)

### IRT•ScanMaster Systems, Inc.

319 Garlington Road, Suite B4  
Greenville, SC 29615, USA  
Phone: (864) 288-9813  
Fax: (864) 288-9799  
e-mail: [irtinc@irtscanmaster.com](mailto:irtinc@irtscanmaster.com)

