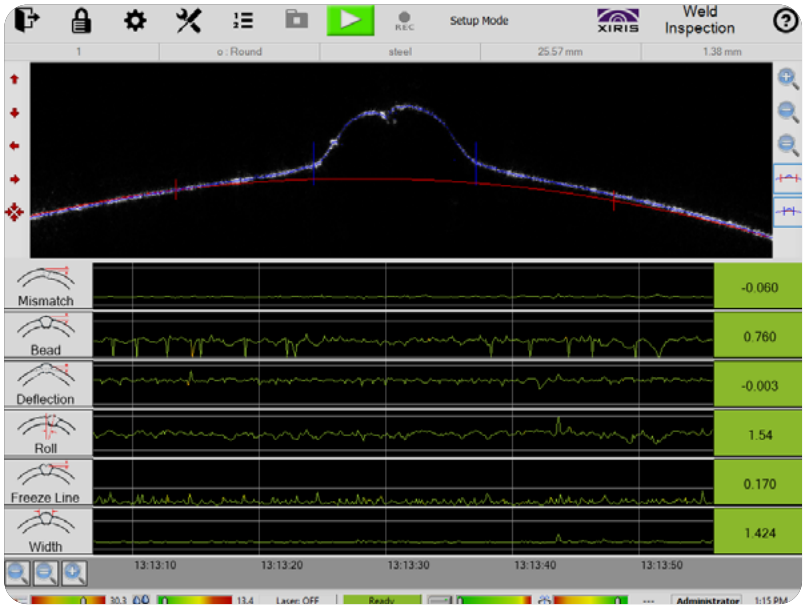

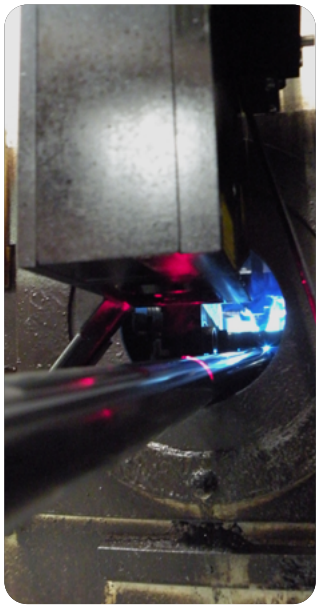

XIRIS
Inspection Solutions with Vision

WI-2200/3000 Technical Overview

Weld Inspection for Tubes / Pipes

Description

The WI-2200/3000 post weld inspection system has been exclusively created for the tube and pipe industry to detect quality issues related to the forming, welding and scarfing processes.

Making welded tube and pipe requires several key variables to be in check for efficient and stable production and to meet the increasing quality demands of the industry. Measuring and monitoring these variables is the first step in controlling them and improving weld quality.

Xiris's proven laser-based vision system technology with high resolution, fast data capture and analysis rates provides real-time detection of defects down to 0.015 mm in size.The system can be a single or double head configuration, to monitor post weld and/or post scarf processes.

Benefits Of The WI-2200/3000 Inspection Systems

- Simplify and reduce mill set up time with real-time feedback on adjustments.
- Improve weld quality and minimize downtime, with 100% in-line monitoring and direct integration with the mill's marking system.
- Non-contact, non-destructive sensors do not interfere with forming, welding and scarfing process.
- Reduce operating costs by lowering material scrap, customer returns, and product liability claims.
- Improved Mill efficiency with real-time process monitoring, trend reporting, warning and alarms.
- Easily fine-tune settings for on-the-fly configurations for continuous production.
- Reduce mill set-up time and increase overall production with unlimited data presets.
- Evaluate shift efficiency, yield, and raw material quality with data logging.
- Safely operate the Sensor Head with four levels of interlocks and quick automatic stopping of the system in case of emergency.
- Powerful software suite with proprietary 3D triangulation algorithm allows for high-speed processing with closely spaced data intervals.

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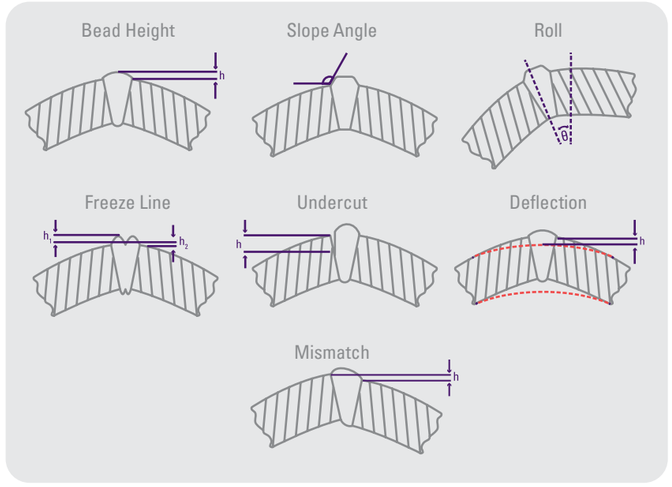
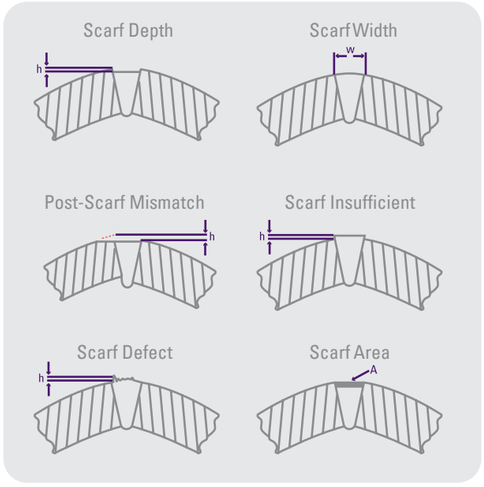
Identifying Weld and Scarf Defects Using Xiris Weld Inspection Systems

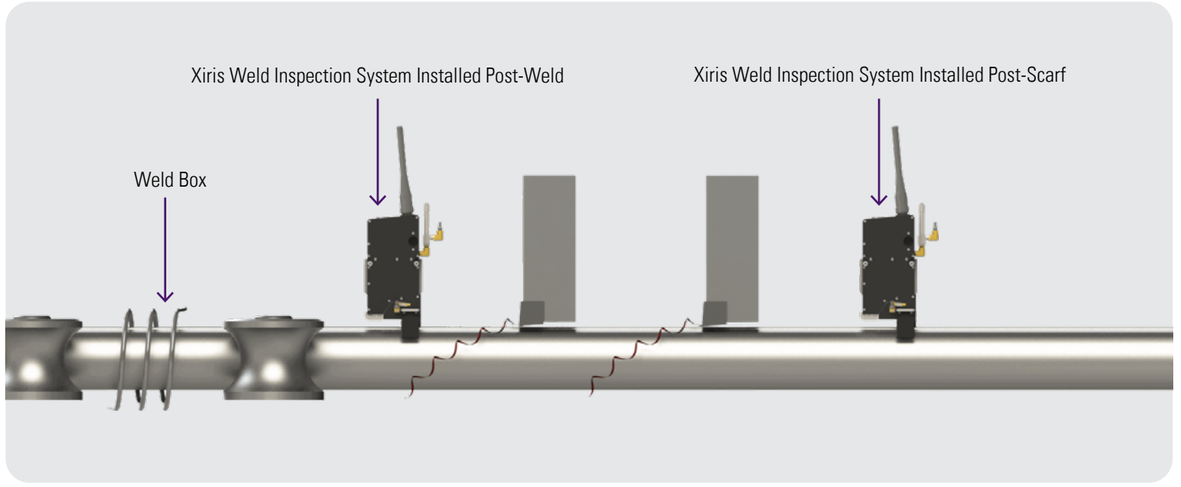


Weld Defects

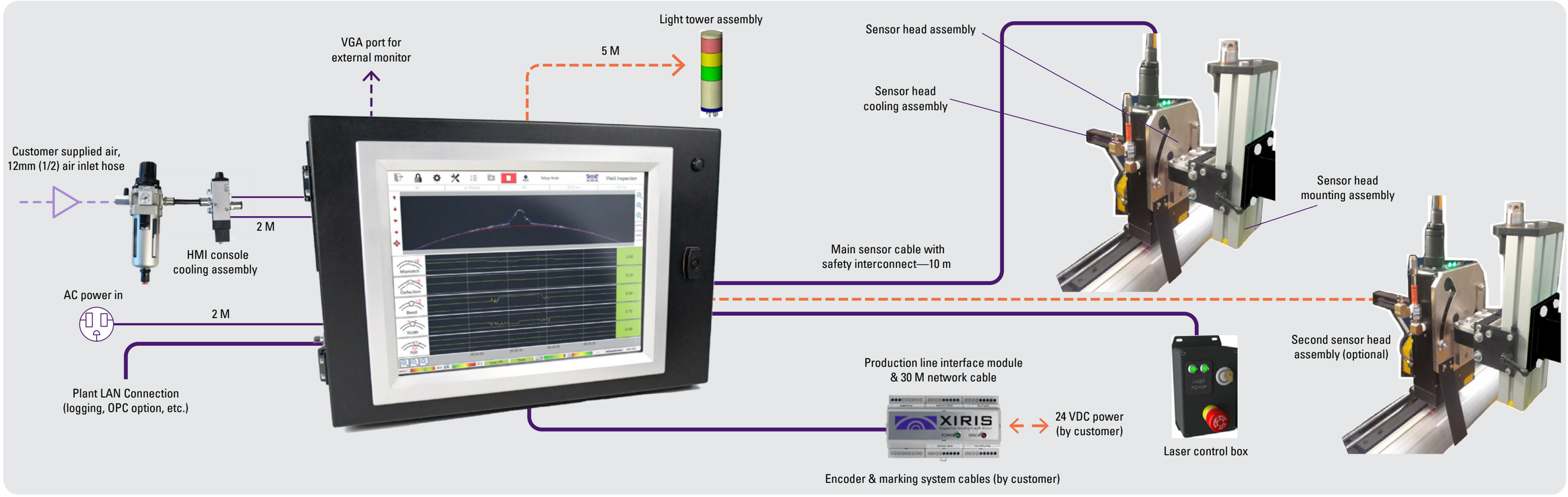


Scarf Defects

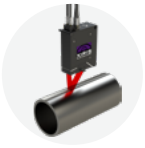
WI-2200/3000 Technical Overview · Weld Inspection forTubes / Pipes



WI-2200/3000 Standard Configuration with Options



Next-Gen WI-2200/3000 System Performance Characteristics

Sensor Head Parameters	 WI-2200		 WI-3000		
	XR14	**XR23**	**XR24**	**XR48**	**XR80**
Min. Tube/Pipe Size (OD)	5 mm (0.20")	13mm (0.51")	13mm (0.51")	30 mm (1.18")	50 mm (1.97")
Max. Weld Bead Width	4.0 mm (0.157")	7.3 mm (0.289")	7.5 mm (0.295")	18 mm (0.71")	28 mm (1.1")
Standard Speed* [profiles/sec]	140	140	140	125	140
Standoff from surface	13 mm (0.51")	13 mm (0.51")	73 mm (2.87")	73 mm (2.87")	73 mm (2.87")
Horizontal field of view	14 mm (0.55")	23 mm (0.90")	24 mm (0.94")	48 mm (1.89")	80 mm (3.15")
Vertical field of view	3.2 mm (0.126")	5.6 mm (0.22")	6.8 mm (0.27")	15.9 mm (0.63")	36 mm (1.42")
Horizontal resolution	7 µm (0.0003")	13 µm (0.0005")	13 µm (0.0005")	25 µm (0.001")	75 µm (0.003")
Vertical resolution	8 µm (0.0003")	14 µm (0.0005")	20 µm (0.0008")	35 µm (0.0014")	105 µm (0.004")

* Sensor speed can exceed 250 profiles per second, with <50% vertical FOV

Specifications

	WI-2200	**WI-3000**
Laser Power	Class 2	Class 3B
Resolution	Monochrome CMOS HD Sensor 1920 x 1080 pixels	
Frame Rate	Standard Speed 125 profiles per second and capable to over 250 profiles per second	
Sensor Head	128 mm (5.0") (W) X 59 mm (3.1") (D) x 244 mm (9.6") (H); 4.0 Kg (9 lb)	
Sensor Head + Optional Mount Bracket- Size	128 mm (5.0") (W) X 222 mm (8.7") (D) x 346 mm (13.6") (H); 7.0 Kg (15 lb) Configurations available for Left to Right or Right to Left mills	180 mm (7") (W) X 260 mm (10") (D) x 450 mm (18") (H); 7.4 Kg (16 lb) Configurations available for Left to Right or Right to Left mills
Cooling Assembly (Sensor Head)	Adjustable Air pressure for coolant inlet: 220 L/min @ 6 bar (8 cfm @ 90 psi)	Water Cooled 2 L/min 15-25°C (59-77°F)
HMI Enclosure	Industrial enclosure with 15" Touch Screen LCD, 485 mm (19.1") (W) X 212 mm (8.4") (D) x 340 mm (13.4") (H); 15.5 Kg (34 lb)	
GUI Languages Supported	English, German, Spanish, Portuguese, French, Dutch, Japanese, Chinese. Others on request.	
Cooling Assembly (PC Console)	Fan cooled up to 40°C ambient, or with optional compressed air cooling, requires 700L/min at 6 bar (25 cfm at 90 psi)	
Machine Interfaces	4 Digital Inputs (24VDC, NPN or PNP), 4 Digital Outputs (24VDC for Dry Contacts), Connection for Marking System (Encoder Inputs / Sprayer Outputs), OPC (Optional)	
Cable	20 m (65') available on request.	
Operating Conditions HMI	Power: 100 –240 VAC, 500 watts, 50-60 Hz., Ambient Temperature: 10-50 °C (50-122°F)	
Profile Types	Round, V-Shaped, Step, Flat, Asymmetrical, Oval/Eliptical	

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