



LANDSCAN

LANDSCAN LSP10, LSP20 and LSP21 infrared linescanners for high temperature applications

The new Landscan LSP10, LSP20 and LSP21 high speed, wide angle infrared linescanner heads are designed for accurate measurement of high temperatures for process imaging and control in the metals industries.

A choice of Landscan Control signal processor and LSP mountings and accessories is available to interface with local process control systems and Landscan WCA software.

High Temperature LSP Linescanners

LSP linescanners are extremely compact and have a robust sapphire window, minimising maintenance. Scan speed, sighting angle and focus are all variable and a built-in laser targeting system aids alignment. Small target spot size and fast speed of response enables leading edge detection.

Landscan Control Signal Processors

The Landscan Control processor provides serial or Ethernet communications to the plant PLC. Additional display, data analysis and storage is provided by a PC server operating Landscan Windows® Control and Analyse (WCA) software.

Key Features

- Temperature range from 200 to 1400°C/392 to 2552°F
- Temperature resolution 0.1°C (LSC_B processor)
- Fast speed of response - provides leading edge detection
- Variable focus from 1m/39.6in to infinity
- Scan angle of 80°, software adjustable to 40°
- Scan speed of 10 to 100Hz (adjustable)
- 500:1 field of view (95% energy (LSP10 and LSP21))
- Built-in laser to define scan plane and angle
- Single cable connection between scanner and processor

Typical applications

- Hot strip and hot plate mill
- Beam, billet and sections
- Rod and wire
- Continuous casting
- Annealing
- Galvanising and galvaneal
- Research and development

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Infrared Temperature Measurement

An **AMETEK**® Company

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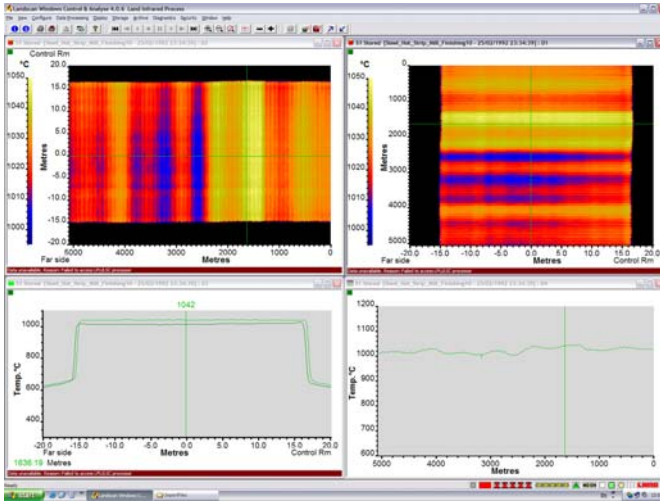
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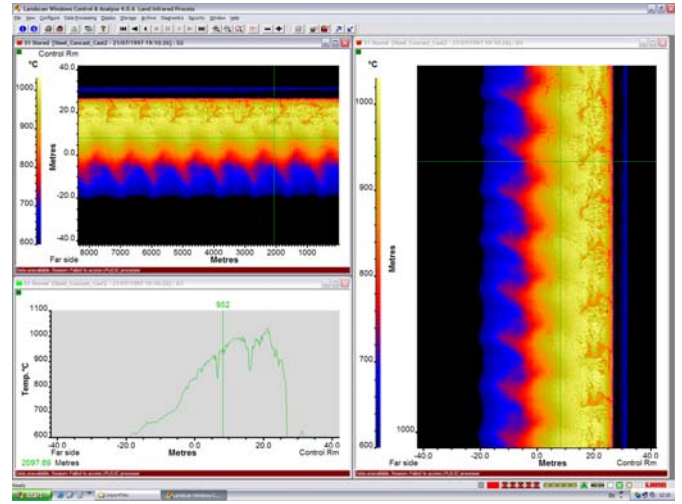
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Typical linescan profile on a hot rolling mill



Typical linescan profile on a concast plant

Specifications

Linescanner Head	LSP10	LSP20	LSP21
Measurement range:	600 to 1400°C/ 1112 to 2552°F	200 to 850°C/ 392 to 1562°F	300 to 1000°C/ 572 to 1832°F
Scan angle:	80° (software adjustable to 40°)		
Scan speed:	10 to 100Hz adjustable in 10Hz steps		
Spectral response:	1μm	2.2μm	1.9μm
Speed of response:	≤1μs	≤1.5μs	≤1μs
System accuracy:	±2°C/3.6°F		
Repeatability:	<0.5°C/0.9°F		
Temperature resolution			
5% of range:	≤5.5°C/9.9°F	≤4°C/7.2°F	≤4°C/7.2°F
15% of range:	≤4°C/7.2°F	≤2°C/3.6°F	≤3.5°C/6.3°F
30% of range:	≤2°C/3.6°F	≤1°C/1.8°F	≤2°C/3.6°F
Above 50% of range:	≤1°C/1.8°F	≤1°C/1.8°F	≤1°C/1.8°F
Emissivity:	0.20 to 1.00		
Focus distance:	1m / 39.7in to infinity (continuously adjustable)		
Field of View:	500:1	300:1	500:1
Ambient temperature:	5 to 60°C/41 to 140°F (specified) 5 to 70°C/41 to 158°F (operating)		
Ambient stability:	≤1° indicated/10° ambient		
Alignment:	Class 2 Laser: Integrated laser indicating scan plane. Laser scan rate: 1Hz nominal		
Sealing:	IP65		
EMC:	EN 61320 Class A (immunity and emission), IEC 1010 (safety)		

Dimensions

