AMETEK LAND HAS BEEN MANUFACTURING PRECISION MEASURING EQUIPMENT SINCE 1947.

WE ARE SPECIALISTS IN NON-CONTACT TEMPERATURE MEASUREMENT AND COMBUSTION MONITORING WITH APPLICATIONS ACROSS DIVERSE INDUSTRIES SUCH AS STEEL AND GLASS MAKING, POWER GENERATION AND CEMENT MANUFACTURE.

As part of AMETEK Process & Analytical Instruments Division since 2006, our customers benefit from the worldwide AMETEK sales and service team.

Accurate temperature measurement is critical for the production of high quality steels. AMETEK Land’s non-contact infrared thermometers provide these accurate, non-invasive measurements at all critical positions through the hot rolling mill process. Many of our sensors are unique developments as requested by our customers.

From specialized Spray Chamber Probes, Reheat Furnace systems to rugged Understrip probes, we offer choices of single point thermometers, scanners and process thermal imagers for all industry applications. AMETEK Land has the innovative and time-proven solutions for your temperature measurement needs.

Single point radiation thermometers, also referred to as Infrared Pyrometers, have been widely used in Steel Hot Rolling Mills for over 60 years. They offer many advantages compared to contact sensors such as thermocouples. They are installed at a distance and view the infrared radiation that is emitted by the target object. Their non-contact operation allows them to operate out of harm’s way. Because they do not touch the surface, they can accurately measure moving objects, whereas a thermocouple would suffer from a frictional effect generating heat and eroding the thermocouple. Pyrometers also feature extremely fast response speeds of a few milliseconds, this makes them very useful for measuring fast moving strip or rod.

PROCESS THERMAL IMAGING
In today’s world, markets require higher quality and companies expect improved profitability. Complete temperature measurement with line scanners and process thermal imagers provides a total picture of the product’s temperature distribution. With this information more precise process control is possible resulting in improved quality products and satisfied customers.

FOR MORE INFORMATION VISIT: WWW.AMETEK-LAND.COM/INDUSTRIES/STEEL
STEEL PRODUCTION
HOT ROLLING MILLS

LOCATION APPLICATION PRODUCTS TEMP RANGES
1 Caster Spray Chamber Spray Chamber Probe 1112-2912 °F (600-1600 °C)
2 Caster Exit SPOT R100 & M100, LSP-HD 10, NIR, Cyclops 100L 932-3272 °F (500-1800 °C)
3a Pre-Crop Shear/Cutting LSP-HD 10, Cyclops 100L 1112-2552 °F (600-1400 °C)
3b Viewing the Cropped End - Billets and Slabs NIR, Cyclops 100L 1112-2552 °F (600-1400 °C)
4 Reheat Furnace Heating Zones FTS, FTI-Eb 932-3632 °F (500-2000 °C)
5 Reheat Furnace Exit SPOT R100 & M100, NIR, Cyclops 100L 932-3272 °F (500-1800 °C)
6 Roughing Mill Entry SPOT R100 & M100, Cyclops 100L-2F, FG 932-3272 °F (500-1800 °C)
7 Roughing Mill Exit SPOT R100 & M100, LSP-HD 10, Cyclops 100L 932-3272 °F (500-1800 °C)
8 Coiler - Hot Coil Box - Short Mills LSP-HD 10 1112-2552 °F (600-1400 °C)
9 Finishing Mill Entry SPOT R100 & M100, LSP-HD 10, Cyclops 100L 932-3272 °F (500-1800 °C)
10 Finishing Mill Exit SPOT R100 & M100, LSP-HD 10, Cyclops 100L 932-3272 °F (500-1800 °C)
11a Understrip Measurements UST1 932-3272 °F (500-1800 °C)
11b Understrip Pre-Coiler UST2, UST3 572-2012 °F (212-1100 °C)
12 Downcoiler / Upcoiler SPOT M160, LSP-HD 21, Cyclops 160L 482-2912 °F (250-1600 °C)

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NON-CONTACT TEMPERATURE MEASUREMENT

**HotSpotIR**
Continuous infrared thermal line scanning detects small, hot inclusions on the coke conveyor. With alarms set to operate an inerting or diverting system to prevent expensive belt damage.

**LSP-HD**
Don’t just measure a strip when you can measure the whole product edge-to-edge. High resolution thermal images and profiles of slabs and strip.

**SPRAY CHAMBER PROBE**
Application specific design for continuous temperature measurements of steel in the spray chamber environment. Rugged, reliable and long-lasting.

**UNDERSTRIP THERMOMETER**
Understrip probes are excellent for strip temperature measurements where the top side is covered with water or is obscured.

**SPOT**
Advanced family of full featured pyrometers. Analog and digital outputs. Integrated alignment, locally or remotely configured.

**MODEL FG**
Short wavelength, high temperature fibre-optic pyrometer. Simple 2-wire 4 - 20mA design.

**FURNACE THERMOMETER**
A high-resolution, fast thermal imager designed to provide detailed temperature information in harsh industrial environments.

**NIR-BORESCOPE**
High resolution short wavelength process thermal imager. Easily mounted through the furnace wall. Accurate temperature measurements at all locations in the thermal scene.

**NIR IMAGER**
High temperature, short wavelength process imager providing high resolution images. Used at the caster exit and crop shear.

**CYCLOPS L**
Industry standard for precise hand-held pyrometers. Real through-the-lens sighting and fully focussable optics provide highly accurate measurements with the assurance that you are measuring exactly what you are targeting.

FOR MORE INFORMATION VISIT: [WWW.AMTEK-LAND.COM/INDUSTRIES/STEEL](http://WWW.AMTEK-LAND.COM/INDUSTRIES/STEEL)
SERVICES

AMETEK Land provides a comprehensive range of after sales services to assist you in obtaining the best performance from our systems. Our services include technical support, certification and calibration, commissioning, repairs, servicing, preventative maintenance and training.

Our dedicated in-house Service Centres provide our full range of services, however, we can also send our highly trained technicians directly to your site to cover planned maintenance schedules and for emergency breakdowns.

We understand the vital role instruments play in your plant’s operation. Any unscheduled downtime or data quality issues can severely impact your ability to run the plant safely, efficiently and in compliance with environmental regulations.

SPECTRUM SERVICE CONTRACTS

Our Spectrum Service Contracts are specifically designed to ensure your instruments are professionally maintained and calibrated to operate at peak factory performance levels throughout their lifetime. On-site service and training are performed by trained AMETEK Land engineers using only factory quality parts. All new and serviced instruments are certified and conform to the published specifications. This gives measurement history from day one, which is often a requirement within quality systems.

AMETEK Land’s instruments are designed to operate in some of the industry’s harshest environments. Whichever instrument you chose, our comprehensive service contracts provide you with numerous benefits, tailored to your individual requirements. All our Spectrum Service Contracts provide you with annual preventative maintenance schedules as standard.

As the designer and manufacturer, we have an unparalleled understanding of your instrumentation as well as a dedicated and highly trained team of service centre technicians to support you. We will take care of your instrument, leaving you to focus on what’s really important - your core business.

SEE OUR OTHER RELATED LITERATURE.: