Slag Detection - Technical Data

Thermal Camera

Maintenance-free thermal camera with un-cooled detector. The camera is consistently designed for industrial applications, featuring intelligent processing functions and a Standard-GigE-Interface for data exchange. It is calibrated with an extended measurement range of up to 2000°C for measuring absolute temperatures with high accuracy.

Type	IRSX-I Industrial Infrared Camera
Temperature Measurement Range	+600°C to +2000°C
Field of View	6.2° x 5° other lenses available on request
Frame Rate	50 Hz
Interface	Gigabit Ethernet
Ambient Temperature Range	-40°C to +60°C
Weight	930 g with lens 6.2° x 5°
Dimensions	55mm x 55mm x 150mm with lens 6.2° x 5°
Protection Class	IP67

Camera Enclosure

Double-chamber protective enclosure, manufactured from stainless steel. An air barrier installed at the front side effectively prevents dust formations at the durable Germanium window. All connection cables are guided through one cable gland with a high-temperature-resistant hose at the rear of the enclosure. Equipped with a wall mount with manually adjustable joint, the enclosure can be easily installed in any required position.

Type	IRCamSafe AIW 168
Enclosure Material	Stainless Steel
Coolant	Water or air
Protective Window	Ø70mm x 3mm
Air Barrier	Adjustable air flow, supply pressure 1 - 3 bar
Cable Protection	Heat resistant hose, configurable length. Resistance to thermal load: up to +1640°C
Ambient Temperature Range	-0°C to +350°C
Weight	10.5 kg
Dimensions	Ø168mm x 505mm
Protection Class	IP67
Mounting Bracket	Heavy duty bracket with joint, made from stainless steel. Load rating 45 kg.

Other Components

Server Computer	Industry standard server computer, 19"metal case for rack installation. The server computer hosts the infrared monitoring software, the database and the web-server
IRCamSafe Controller	Integrated inside the camera enclosure. The board gives a significantly reduced installation effort, allowing a direct connection to mains power and Ethernet without any additional connection cabinet. It features various sensors to continuously monitor the ambient conditions in the enclosure, thus ensuring a safe operation of the camera. ■ 4 Port Switch with 2x LWL-LC 100Base-FX or 2x RJ45(10/100) Up-Links ■ 2 internal sensors for temperature; sensors for pressure and humidity ■ Supports a ring structure of the network for lower cabling complexity ■ Switchable camera power and heater via Modbus-TCP/IP (controlled by the monitoring software)

Interfaces

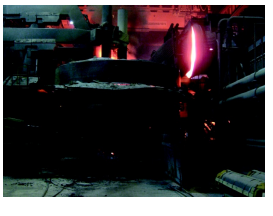
Web-Server	Ethernet Link
ODBC	OPC
Modbus-TCP	SQL Database
Digital I/O, 24V Input/Output,Galvanic-isolated (Fieldbus Module)	

Data Link of Camera and Computer

Gigabit Ethernet
• Up to 90m with Industrial Ethernet Cable
• Up to 500m with Multi-Mode Glass Fiber Cable
• Up to several km with Single Mode Glass Fiber Cable

Other Solutions for Steel Industry

Temperature Monitoring for Continuous Casting



EAF Transformer Monitoring

Ladle Refractory Monitoring

Torpedocar Monitoring

Automation Technology
Vision Sensors and Systems