

→ High Performance imaging and thermal monitoring during the metal casting process at a foundry



Pyroscan-U

COMBUSTION

THERMAL MONITORING

HIGH-PERFORMANCE 1.2 MEGAPIXELS EXTERNAL PYROMETRIC CAMERA

Pyroscan-U is a unique camera specifically designed to monitor the temperature of any object, material or combustion area inside a kiln, furnace or reactor through a standard window.

The small-footprint, ruggedized camera is connected to a remote computer with dedicated software with both visible and thermal high dynamic range and high definition images of the zone. Beyond displaying and recording images, HGH's dedicated software provides thermal information for any point within the field of view such as: temperature, temperature profile and temperature profile evolution. It also supports advanced functions to monitor the shape of the flames or the exact position of the flame front, in real time.



A ZERO MAINTENANCE, NO COOLING REQUIRED ESSENTIAL TOOL

Pyroscan-U high performance sensor is housed in a compact, IP66 resistant box, complemented by a small size electronic IP66 cabinet and a remote computer with optional printer. Since the camera is designed to withstand the environment in the immediate vicinity of the furnace, no additional cooling element is necessary and the installation infrastructure is kept to a minimum. The software is designed to send all the information through the OPC client or through eight 4-20 mA outputs, thus allowing easy integration into the Plant Control System (PCS).

Pyroscan-U requires minimal installation time and wiring; relying mainly on Ethernet or fiber optic connections, the system can be set up in a few hours' time to provide consistent and reliable monitoring over its lifetime. With no calibration or maintenance needed the system cuts down on maintenance and other costs.

APPLICATIONS

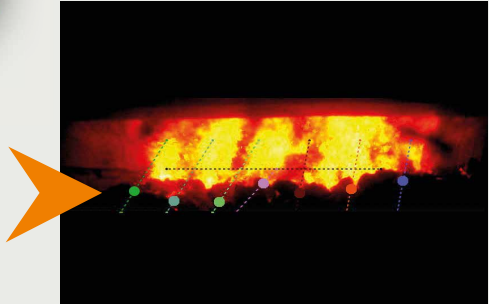
Pyroscan-U is a megapixel and HDR pyrometric camera providing accurate thermal monitoring of combustion processes.

- Because the camera allows for accurate temperature monitoring, detecting any changes due to burner or process adjustment, raw meal and fuel composition variations, Pyroscan-U is particularly well-suited to combustion chambers, furnaces, incineration plants, heaters, boilers...
- Recognizing the needs and importance of flame-front control for the waste incineration furnaces, for instance, specific algorithms have been designed in partnership with integrators and end-users; they support real-time display and transmission of the exact position of the flame front through the OPC client. The Pyroscan-U camera serves to monitor the flame front from outside the kiln for security and productivity management.
- The advanced features embedded in Pyroscan software and its versatility support a number of functionalities which can be defined and implemented by the user to meet his own specific needs, such as monitoring the shape of flames or hot areas, generating alarms upon crossing low/high thresholds...

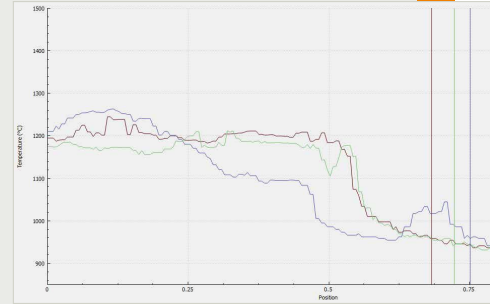


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COMBUSTION | **THERMAL MONITORING**



→ Flame front visualization



→ Analysis and report of flame front position

Example of application for the control of waste incineration processes

CONFIGURATION

The Pyroscan-U includes:

- A visible and pyrometric camera head.
- A compact local electrical control cabinet.
- A PC with dedicated Pyroscan software for data processing, recording and display and interfacing with plant control systems.

ADVANTAGES

- User-friendly and customizable software
- Easy Set Up - no external cooling unit required
- Compact, easy-to-integrate, lightweight
- Cost-effective
- Maintenance is reduced to a minimum
- No calibration needed
- It benefits from more than 30 years' experience accumulated by HGH in infrared thermal cameras for industrial applications

TECHNICAL DATA

Camera Specifications:	1.2 Megapixels, 1296 x 966 resolution, visible and pyrometric
Field of View:	62° (horizontal) x 48° (vertical) / 78° (diagonal) or 44° (horizontal) x 33° (vertical) / 55° (diagonal) (on request)
Software Functions:	Display of visible and HDR (camera dynamic range>120dB) thermal images of the hot area (700°C-1800°C temperature range); Embedded image processing anti-dust filter; Digital zoom in the image; Extensive set of color-coding tables for optimal image legibility; Definition of an un-limited number of temperature measurement areas (line, free-form polygon or single point); Complete toolbox for real-time display and interpretation of area temperature measurements (min, max, mean); User-defined alarms on temperature measurement areas (high or low temperature); User-defined line profiles in the thermal image; History database of temperatures in measurement areas (live or replay temperature vs. time charts); Flame front detection; Video and data record/playback functions and export to .avi files; 4-20 mA output (option); Real-time OPC client interface (option).

Above information is subject to changes without notice



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