



PyrOptix IR Inspection Cameras Advanced imaging systems for superior online visibility and temperature analysis

Enertechnix PyrOptix™ infrared inspection cameras provide superior image quality and depth of view, enabling comprehensive observation and analysis at full load. This real-time ability to identify problems and apply solutions can result in fewer unplanned outages, saving hundreds of thousands of dollars in avoided shutdown costs and improved productivity.

Comprehensive Observation and Analysis at Full Load



PyrOptix Mobile IR Camera in Use

PyrOptix is able to see through obscuring dust and gas to depths of 80 feet, allowing monitoring of developments anywhere in the combustion chamber.

Internal boiler condition inspection benefits:

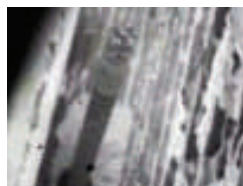
- Higher boiler availability
- Reduced risk of catastrophic failure
- Improved heat transfer efficiency
- Lower maintenance costs

Shell and electrical equipment inspection benefits:

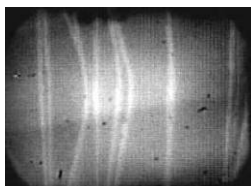
- Identification of leaks
- Detection of hot spots
- Reduced equipment failure

Examples of PyrOptix Real-time Visibility

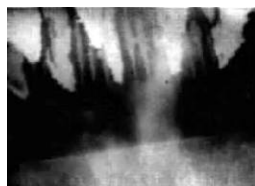
Enertechnix PyrOptix IR inspection cameras are used for some the most critical applications in the operation and maintenance of boiler conditions.



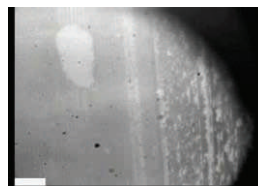
**Lost Sootblower
Nozzle**



Tube Damage



Slag Buildup



Impending Slag Fall



Electrical Hot Spots



Economizer Areas

Specially designed for industries using high-temperature processes—including power generation, waste-to-energy, pulp and paper, and petrochemical—PyrOptix enables you to see internal boiler and furnace conditions safely and effectively.

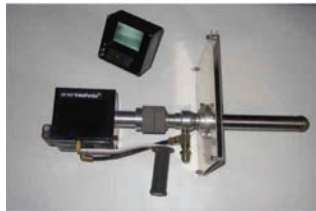
Learn more at www.Enertechnix.com, or call (425) 432-1589 for more information.



PyrOptix Infrared Camera Systems

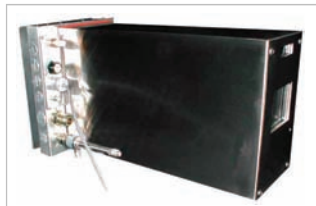
Plant-wide solutions for superior online visibility and temperature analysis

Our durable line of infrared imaging cameras and accessories includes the following high-quality products:



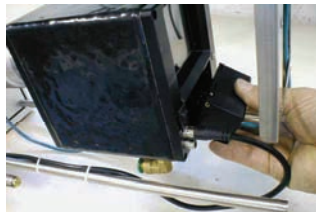
Mobile Camera

The PyrOptix™ Mobile infrared camera kit contains everything an engineer or operator needs to inspect a boiler from any accessible port. The core of the mobile inspection camera kit is an infrared camera designed to see through smoke and ash at temperatures of 700°F to 3500°F. With the addition of a Low Light Lens, the camera sees in the 200°F to 700°F range, enabling inspection of surfaces exterior to the boiler.



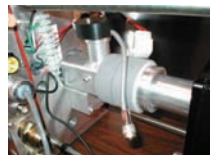
Fixed Mount Camera

The PyrOptix Fixed Mount infrared camera is designed to see through smoke and ash at temperatures of 700°F to 3500°F. The camera aids in visual observation inside the furnace environment, providing information about slag buildup, burner operation, flame position and heat exchanger tube pluggage.



Dual Use Camera

Our dual use infrared camera provides the benefits of both the fixed installation camera and mobile inspections. The fixed installation includes the infrared camera, air-cooled electrical enclosure, lens tube of choice, auto-retract and port rodder. The infrared camera can be removed from the electrical enclosure as desired, and used with the mobility kit and a shorter lens for inspections at any accessible boiler port.



PyroTemp™ TLP

The addition of an infrared pyrometer instrument to the lens assembly allows for greater observation and analysis.



Off-Axis Lenses

Our off-axis lenses provide a rotating 360° view of the boiler walls during mobile inspections.



Straight Lenses

Lens tubes come in lengths from 20 inches and longer and are available with 20°, 30°, 64° or 120° fields of view.



Image Processing Software

We offer a core set of software programs that provide specialized information to operators.



About Enertechnix

Enertechnix develops and commercializes innovative technologies for process and environmental monitoring to improve the efficiency, cleanliness and safety of large-scale energy conversion processes.

Learn more at www.Enertechnix.com, or call (425) 432-1589.

Contact Enertechnix for a complimentary PyrOptix demonstration.

If you're interested in seeing your boiler or furnace under full-load conditions, contact us to schedule your free on-site demonstration of the PyrOptix IR imaging system.

Enertechnix, Inc.
PO Box 469
Maple Valley, WA 98038

Phone: (425) 432-1589
Fax: (425) 432-1557
Email: sales@enertechnix.com