HIGH-TEMPERATURE FURNACE CAMERA SYSTEMS

FIRED HEATERS

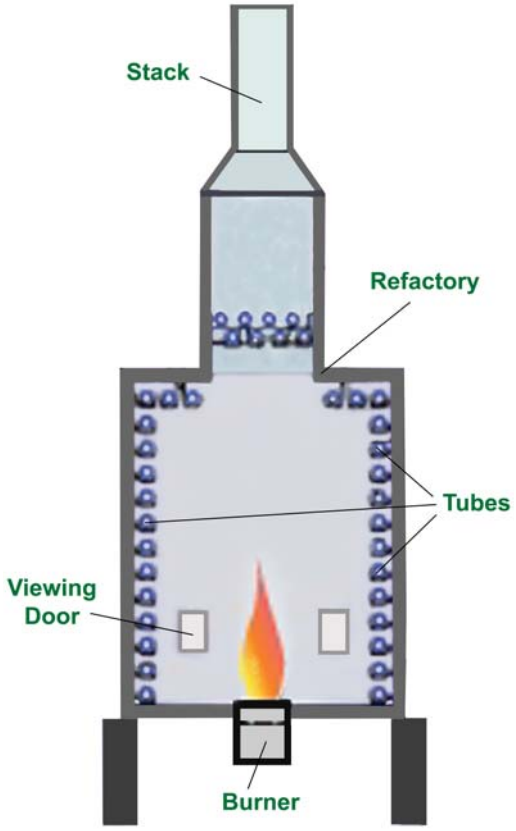
Application Highlights

A Fired Heater or Process Heater is used to effect a chemical reaction in the feedstock (flowing inside tubes) through the application of heat from controlled flame(s). Most refineries and chemical plants have numerous heaters that range widely in size and layout with vertical or horizontal cylindrical tubes placed along the walls of the heater's combustion chamber. Burners can be located on the top, bottom or side walls of the heater depending on the type of heater and its process. Fired heater applications include: crude heaters, cokers, hydrocrackers, thermal crackers, catalytic reformers, steam superheaters, vacuum heaters and others.

Portable and fixed Lenox Fired Heater Camera Systems enable hydrocarbon processing plants to increase fired heater reliability and performance by providing effective and safe 24/7 visual inspection for diagnosing and solving problems associated with burners. By viewing directly inside a fired heater you can optimize fuel / air ratios by monitoring burner performance and identify potential problems such as:

- Burner light-off failure, flame out and lift-off
- Flame impingement on tubes, tube displacement and leaks
- Irregular flame patterns, flame instability and smoky flames

Lenox Fired Heater Cameras are available in a choice of direct or right angle fields of view and can be installed in any available 2-3/8 inch (61 mm) opening in the heater to view the burner(s) from above. Fired Heater Cameras are the perfect compliment to flame scanners and other combustion monitoring instrumentation.



Why Use Lenox Furnace Camera Systems?

- Designed to be rugged and durable for the brutal atmosphere of the hydrocarbon processing industry.
- Proven reliable cooling system and the highest camera resolution with superior optics.
- Minimal maintenance and operating cost once correctly installed.
- Backed by an industry leading two year warranty.
- Flexibility in choice of penetration lengths, viewing angles, water or low consumption air-cooling and a selection of portable water-cooled or air-cooled models.
- Lenox know how, expertise and installation/field service.

LENOX FURNACE CAMERA SYSTEM SELECTION GUIDE

The 1 and only

FIRED HEATER CAMERA SYSTEM DESIGNED FOR THE HYDROCARBON PROCESSING INDUSTRY

with extreme durability, higher resolution, a time-tested cooling system, a longer warranty, and a much lower average cost to operate.

Fixed and portable Lenox Fired Heater Camera Systems are designed for applications up to 3000°F (1649ºC) and require a fired heater wall penetration of only 2-3/8 in. (61mm). Lenox Fired Heater Camera Systems consist of a high-resolution (540 line), color CCD camera and sophisticated light volume control, a Lenox exclusive that allows an operator to remotely adjust the amount of light transmitted to the camera eliminating the flaring / blooming common with other systems. Quartz optics, another Lenox exclusive, are used and can withstand temperatures up to 1200°F (649°C) higher than the glass lens used in other systems. The compressed air-cooling system provides reliable performance while using considerably less air than competing systems. The fixed system Wall Box mounting assembly provides a protective housing for the system and serves as the primary coolant shroud.

Model 6515FC Fixed Series

Optional fixed system accessories include an Automatic Retract System that automatically pulls the Lenox furnace camera back should a loss of cooling occur, preventing possible over - temperature damage to the furnace lens assembly; a high efficiency compressed Air Filter System for removing oil, water and particulates providing clean air to the camera system insuring trouble-free performance and a clear view of the combustion. It uses a self–purging coalescing filter and a pressure differential switch, which may be wired to an alarm, letting the operator know when its time to change the filter elements. Flat CRT or Flat LCD monitors and a Digital Video Recorder are also available.

Model 6515FDC Portable Diagnostic Series

Please contact us for more information about our products and capabilities and to discuss your specific application.

LENOX Instrument Company

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