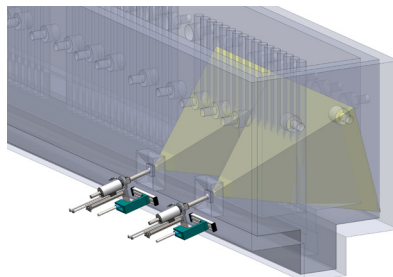
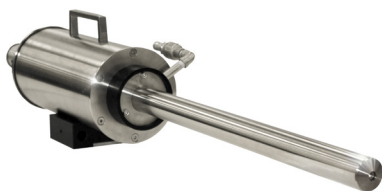


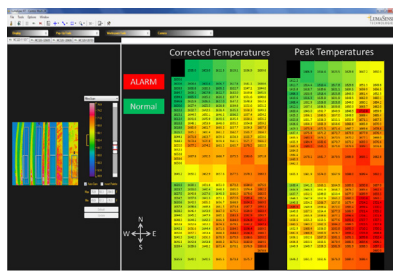
IMPROVING REFORMER EFFICIENCY & SAFETY THROUGH BETTER TEMPERATURE CONTROL



3D Rendering of Reformer



Thermal imager in hardened enclosure with borescope lens



*LumaSpec™ RT
Advanced imaging software designed for reformers with OPC support*

The Opportunity

Reformer furnaces are one of the highest priority equipment in petrochemical refineries. Maximizing the efficiency of the production process while minimizing system downtime and safety issues is a primary concern for plant operators.

Common concerns within this process include proper tuning of the burner firing efficiency and maintaining the reformer tubes at the correct temperatures to prolong the life of the tubes. The objective is to minimize variation in reformer tube wall tempera-

ture (TWT) and operate at a higher reformer outlet temperature (ROT) without violating maximum allowable TWT.

Conventional methods of monitoring include portable pyrometers, portable thermal imagers, and shielded Type-K thermocouples. However, these methods have been proven to be unreliable, expensive to implement, prone to operator variation, and do not provide comprehensive ability to detect hot spots.

Our Solution

Direct measurement using FurnaceSpection™ for Reformers

- Network of specialized thermal imagers designed for continuously viewing inside reformers
- Precise measurement of the temperature distribution on the parts (high camera resolution of 640 by 480 pixels)

Real-time thermal imaging software LumaSpec™ RT

- Real-time analysis and display of temperature data (e.g. HotSpots, Isotherms)
- Software collects streaming thermal data from cameras and continuously calculates TWT for display to operator and output directly to DCS
- Systematic monitoring of user-defined regions with automatic alarming mode
- Integration into an existing company network via Ethernet and possibility of connection to a PLC

Your Benefits

- ✓ Improves reformer performance while reducing potential process and safety risks
- ✓ Increase profits by increasing output and lowering operating costs
- ✓ Lower maintenance & repair costs
- ✓ Increase uptime
- ✓ Allows for greater control and safer operations at optimum temperature