

#### Process Instruments

# 9 Examples of how the ThermoView® Thermal Imager keeps Production flowing

Performing tasks like process monitoring and control, product monitoring, or quality pass/fail checks? Concerned about on-site safety? No matter your industry or application, temperature control is key to ensuring things like process traceability and product quality. Although there are various solutions that may be suited to your process, the ThermoView TV40 is a fixed thermal camera and software package that offers continuous infrared and visual feeds with actionable analytics designed to keep your process, products, and site under control 24/7.

With so many possibilities, the following is a quick list to give you an idea of what thermal imaging and the TV40 can do for you.



The Thermoview TV40 is a fixed thermal imaging camera (left) and software package with upgradable Pan and Tilt accessory (right) to continuously view

# Safety

# 1 Copper Smelting Kilns

In this application, the TV40 is positioned to monitor the outer refractory surface of the kiln for hot spots. This is typically an indicator that refractory is breaking down, which can cause both downtime and hazardous working conditions for employees that can be avoided with auto-alarming features.

# 2 Steel Ladles

Like copper smelting kilns, in some steel applications the thermal imager is aimed to monitor the surface of a ladle for hot spots. The TV40 is designed to easily detect inconsistent temperatures with unlimited areas of interest and allows users to set alarms for when parameters are out of established conditions to better protect you.

# 3 Enclosed Chemical Ovens

Enclosed chemical ovens are often used in rubber-based product manufacturing, where some facilities have implemented fixed thermal imaging to confirm product temperature prior to opening the oven, which ensures operator safety and helps to prevent on-site fires.

# Quality

# 4 Industrial Cooking Ovens

What determines quality depends on your situation and workflow. An industrial cooking operator, for example, has integrated continuous monitoring with fixed thermal imaging to verify that food has been cooked to the proper temperature prior to packaging.









# 5 Backlight Production

Automotive glass manufacturers test every window to ensure the defroster grid meets stringent specifications and that each electrical strip performs as required. With fixed thermal imaging, pass/fail results are immediate, allowing the manufacturer to improve throughput and ensure product traceability.

## 6 Ceramic-Lined Products

In some chemical applications, fixed thermal imaging is used to detect hot spots on ceramic-lined products. If these products get too hot, the overall quality of the end-product could be affected. Facilities that implement the TV40, however, are also able to avoid product re-work rates with visual and infrared inspections that alert your team when conditions are changing.

## **Productivity**

## **7** Vinyl Flooring

For the production of vinyl flooring, verifying that material is a consistent, even temperature is critical to ensure multi-layer bonding. Simultaneous infrared and visible sighting allows you to efficiently see inconsistencies in material instantly as well as easily locate any discrepancies.

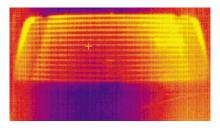
## 8 High-Carbon Steel Processing

Fixed thermal imaging also enables you to maximize uptime of your equipment and throughput of your product. In high-carbon steel processing applications, for example, the TV40 monitors product temperature while it goes through the customization process to ensure that it is being evenly heated.

# Integration

## 9 Steel Ladle Shrouds

While looking at steel ladles, the thermal imager is positioned to watch the automated process. Users can interface with the TV4O system using discreet I/O, or industrial Ethernet protocols such as EtherNet/IP or Modbus to initiate trigger events and receive alarms and provide ladle data to other plant monitoring systems for further data analysis. Additional benefits can be realized by integrating multiple cameras to view the entire area to be measured.









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