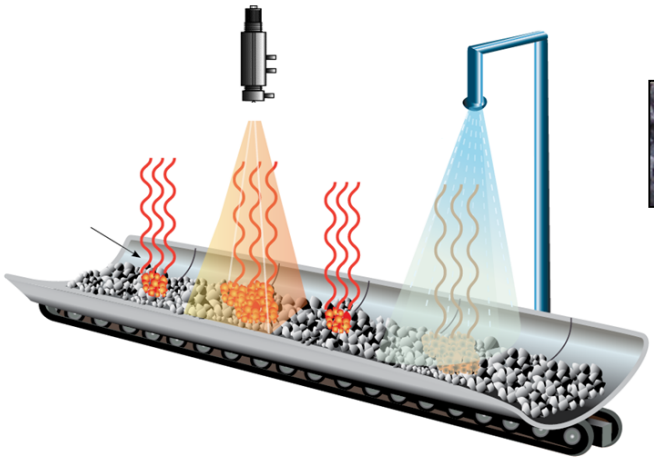
# SUCCESS STORY 63
## *HOT SPOT DETECTION ON COKE CONVEYERS*



**Q** How can you automate hot spot detection in coke on a conveyor belt?

**A**

### Situation and background

Temperature monitoring for the coke process is essential for safety reasons. Unplanned line stoppage and downtime is extremely costly. After the coke leaves the baking process, it is cooled using water and then the quench car unloads the coke onto the conveyor belt. Hot spots, which could damage the conveyor belts and other equipment, can occur.

### The winning solution

- Several infrared thermometers are mounted over the full length of the conveyor.
- Outputs are triggered when the defined threshold temperature is exceeded, activating water spray jets that cool the product and quench the hotspot.
- Specifically designed bulk goods pyrometer with dedicated 2:1 wide-angle optics is used and covers broad conveyor temperatures with a single pyrometer.
- Minimized front aperture is used, for maintenance-free application in extremely dusty environments.
- High quality stainless steel components (V4A) are used, to resist chemical damage caused by the extremely corrosive environment.

### Savings made

- Risk of fire in the storage area is minimized. Damage from a storage fire can range in cost from $200k to over $1 million.
- Reduced hotspot damage to belts reduces the number of replacements needed, saving $20K per year.

## KEY FACTS

**Industry**
Steel

**Customer's End Product**
Coke

**Process Temperatures**
Ambient to 600°C/1112°F

**Distance to Object**
1.5 to 2 m (4.9 to 6.6 ft)

## PRODUCT AND BENEFITS

**DZATXSLTCFW**

- Compact sensor with IP65 environmental rating allows maintenance-free usage in difficult environment
- Simple two-wire installation (3 wires with alarm output) for ease of installation
- Adjustable temperature range and alarm setpoint via HART/RS232 communication for flexibility and ease-of use