Manufacturing facilities are ideal candidates for the SigniFire video flame and smoke detection technology. Many plants feature large open areas and fires can spread quickly when combustible material is readily available. SigniFire has been successfully installed in areas where expensive machinery (vital to day-to-day operations) is located and to protect entire facilities that could not be adequately covered by conventional methods.

CHALLENGING ENVIRONMENT

Manufacturing facilities are typically large volume structures filled with machinery responsible for producing finished goods. Many fires start as a smoldering event as machine parts overheat. These fires can take many hours to grow before being detected by conventional detectors. Installation of SigniFire cameras allow detection of these events hours earlier, before the plant is damaged, smoke becomes an issue, or there is any loss of expensive machinery and/or coinciding business interruption.

WHY VIDEO FLAME AND SMOKE DETECTION?

Video smoke and flame detection has several advantages over traditional types of smoke detection.

- EARLIER DETECTION - Because the cameras ‘see’ the fire at the source, they detect earlier than traditional smoke detectors that require the smoke to reach the sensor.

- IMMEDIATE SITUATIONAL AWARENESS - Because the camera is a true network security camera, images can be viewed in real time at a guard station so an immediate suppression response can be initiated.

- LESS DEVICES TO INSTALL - each SigniFire camera can cover a large volume which will lead to fewer sensors causing reduced installation and maintenance costs.
**MANUFACTURING FACILITIES**

**HOW DOES SIGNIFIRE WORK?**

Artificial Intelligence using Video Analytics Software

- Scans 640 x 480 pixel images at a rate of 15 times a second
- 4.5 million data points analyzed by Texas Instruments Digital Signal Processor
- Software develops temporal patterns based on pixel DSP filters
- Patterns processed by Neural Network to identify flame and smoke
- Alarms communicated through dry contacts or IP based video management

**WHICH FIRE PROTECTION SYSTEMS HAVE BEEN TRADITIONALLY USED IN CULTURAL PROPERTY PROTECTION?**

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPRINKLERS</td>
<td>Sprinklers are typically mandated by code and are triggered based on high temperature. They are designed to save the building shell but not the contents of a building</td>
</tr>
<tr>
<td>LINEAR HEAT DETECTORS</td>
<td>Linear heat can be used as a pre-action for sprinklers but are again activated by high temperature and will not detect fires at the early stage.</td>
</tr>
<tr>
<td>BEAM DETECTORS</td>
<td>Beam detectors are placed at ceiling level and can cause nuisance alarms based on blockage or misalignment. High ceilings can mean smoke stratification and diffusion issues.</td>
</tr>
<tr>
<td>SPOT DETECTORS</td>
<td>Spot detectors are usually either photo electric or ionization and are placed at the ceiling level which delays detection of smoke.</td>
</tr>
<tr>
<td>ASPIRATED SMOKE DETECTORS</td>
<td>Aspirated smoke detection (where smoke is drawn through a series of tubes back to a central detector) is normally faster than spot and beam detectors but still can have issues with smoke stratification and diffusion as well as smoke transport time and installation costs.</td>
</tr>
</tbody>
</table>

**VIDEO SMOKE AND FLAME DETECTION PROVIDES A BETTER SOLUTION FOR MANUFACTURING FACILITIES THAN TRADITIONAL SMOKE DETECTION PRODUCTS.**
Manufacturing facilities

Applications
- Steel Mills
- Machine Shops
- Manufacturing Facilities
- Industrial Facilities
- Chemical Plant
- Pharmaceutical Plant

The total solution

Fike has long been known for being a leader in service, support and delivery in the fire protection industry. No matter what the concern, no matter what the time, we make it easy to reach a trained, knowledgeable Fike representative who will assist you quickly. Combine that with the most advanced technology available in fire alarm systems, competitively priced to meet all your application needs, and you have a total solution for all your fire alarm and fire protection needs.