

# Infrared Monitoring System

Early Fire Detection and Security Applications



**Monitoring of waste bunkers, warehouses and open areas**  
**Automated early detection of bunker fires**  
**Prevention of toxic air pollution emissions**  
**Established fire-protection system**



## InfraTec

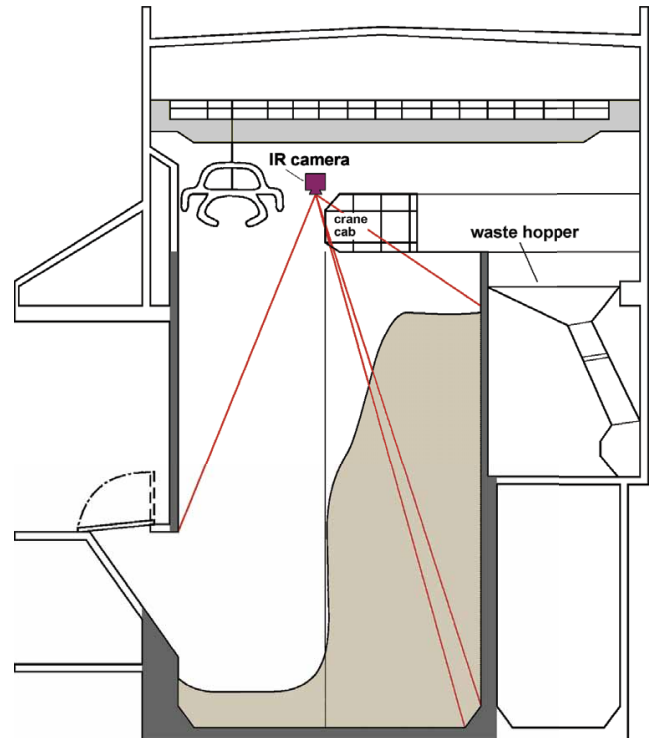
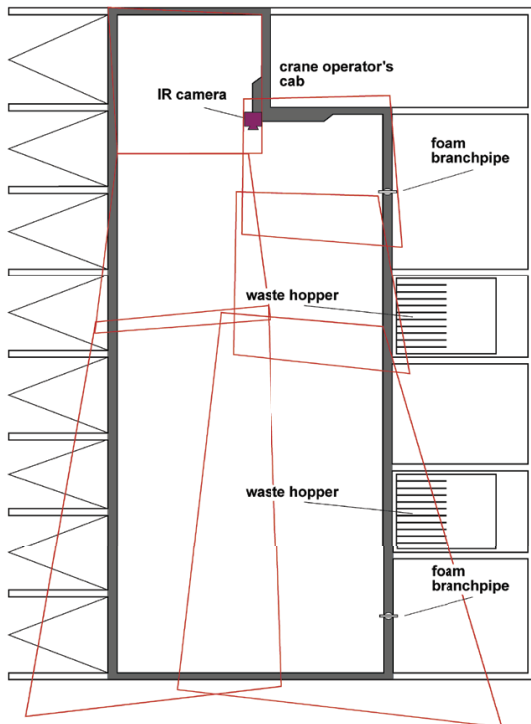
Just ask the specialists ...

Reliability by  
Automated Thermography

# Complete Storage Space Monitoring

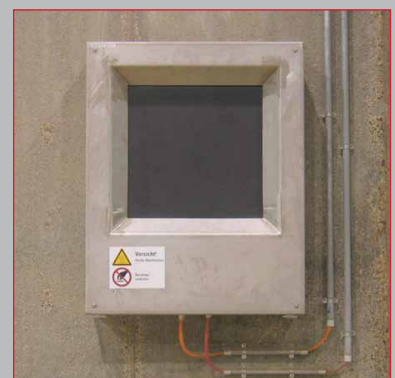
## Features

- Works even with one single thermographic camera by means of pan-tilt head
- Automated scanning of several inspection sections
- Maximum cycle time 2 minutes
- Sector position accuracy  $< 0.2^\circ$
- Switch to manual control for observing suspect spots and evacuating critical objects



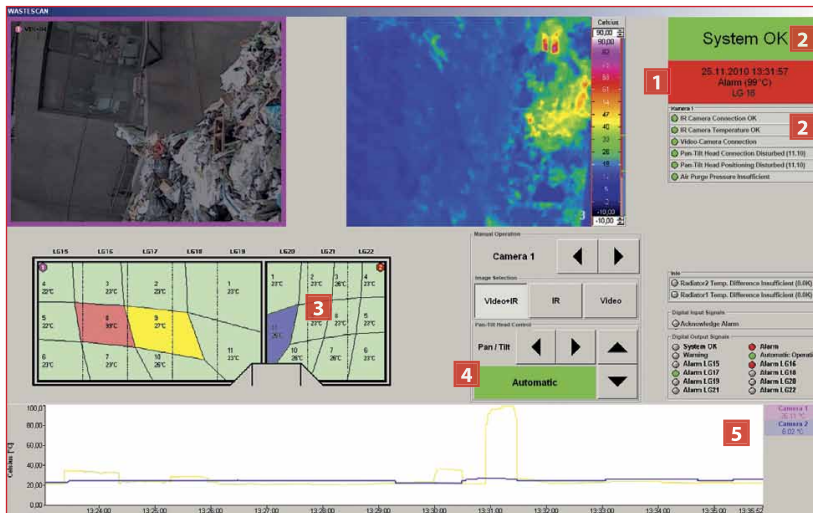
## High-resolution Thermographic Camera VarioCAM® hr

- Quality made in Germany
- Uncooled FPA-Microbolometer detector
- High geometrical resolution
- High-contrast, low-noise thermal image
- Localisation of hot spots even under dusty or smokey conditions
- Spectral range (7.5 ... 14)  $\mu\text{m}$ ; frame rate 50/60 Hz
- Real-time data acquisition (Gigabit Ethernet)
- Internal automatic calibration
- Rugged housing for industrial applications (IP65; stainless steel\*)
- Extremely high level of system availability
- Additional colour video camera\*



Reference emitter

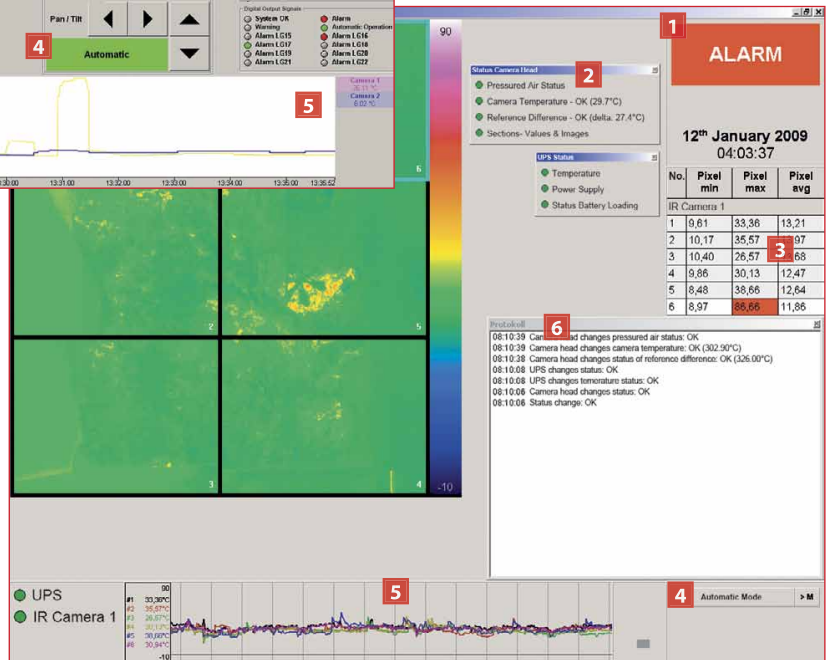
# Powerful Software



Software interface of multiple camera solution

- 4 Control mode, automatic/manual
- 5 Temperature vs. time profil
- 6 Operation logging

- 1 Alarm indication
- 2 Status indication
- 3 Temperature values of single sections



Software interface of single camera solution

- Continious display of current thermal images of all sections
- Simultaneous display of live image (thermal image and colour video)
- Camera and system status indication
- Merging of live images of thermographic and video camera
- Recording of maximum, minimum and average temperature of each section
- Single or multiple-camera system available
- Graphics of temperature-time profile of all sections
- Logging of operations
- Filing of image data

## Alarm Release

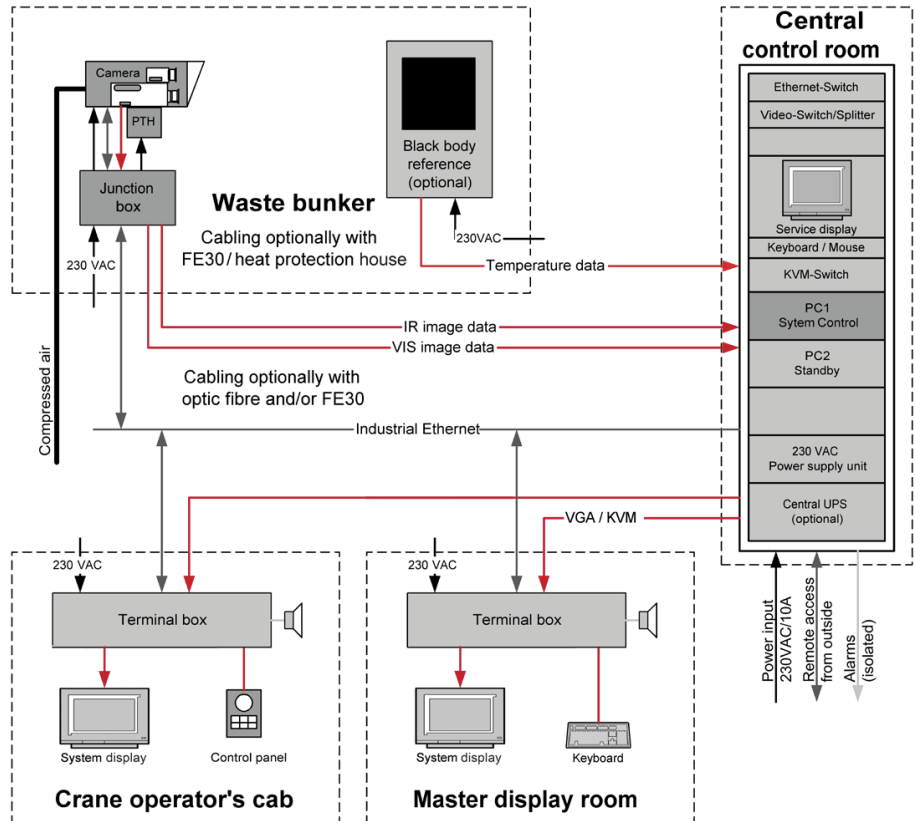
- Automatic alarm release when temperature values exceed critical thresholds
- Multi-level alarm functions with adjustable warning and alarm threshold values
- Analysis of long-term temperature trend with adjustable time basis
- Documentation of alarm situations for analysing fire formation
- Wide range of system versions due to modular design concept



Monitor image with hot spot merging

# Customized System Design

- Suited for sustained continuous operation 24 hours/day
- Transfer of thermal images from the camera to a central control room
- Flexible wiring technology (copper or fibre optics)
- Colour display and control panels in crane operator's cab and master display room
- Uninterruptable power supply\*
- System maintenance at PC in control cabinet (via remote control\*)
- Large surface black body reference for atmosphere transmission compensation\*



\* optionally available

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