DETECTOR

CONDITION MONITORING OF CRITICAL INFRASTRUCTURE

AUTOMATIC FIRE / OVERHEATING DETECTION

TT-DETECTOR

TT-Detector system is designed for a non-stop monitoring of temperature events and processes that occur on the surface of the observed objects and areas. System can quickly identify undesirable thermal changes of the observed object and immediately alerts an operator.

How system performs?

Observed object is continuously monitored by the thermal imaging cameras, that provide its thermal images and simultaneously measure its temperature. A thermal video of the object, including captured data of its temperature, are continuously transferred to a central control system, where they are evaluated with the help of intelligent software in real-time.

If the Thermal Detection system detects undesirable temperature changes of the observed object (exceeding the set temperature, temperature acceleration), it automatically alerts an operator. Such warning can significantly affect a decision of the operator, whose early intervention can prevent damage or avoid a disaster of the observed device.

System description

The system is composed of three basic subsystems.

A. thermographic cameras, which are installed on the site and continuously monitor the temperature of observed object

B. signal and temperature data transferring infrastructure

C. alarm management system, which records and evaluates data from thermographic cameras in real-time

PREVENTION IS CHEAPER
THAN THE **CAUSED DAMAGES**

KEY FEATURES

Real-time monitoring

The control system automatically evaluates temperature data coming from connected thermographic cameras in real-time. The algorithm of management software is set up to be able to instantly recognize undesirable temperature changes of the observed area. If the system identifies such changes (temperature acceleration or exceeding of threshold limit), it immediately notifies an operator.

Monitoring mode is fully automated, so system doesn´t require an operator.

Real-time displaying

During monitoring mode, the system is ready to provide a live video for an operator (of cameras on site). So, an operator has very recent and clear information about each critical event in monitored area. Real-time view of the site helps him to make quick and right decisions about what kind of intervention or reaction is necessary for saving of critical situation there.

Continuous video/data recording

The system allows to perform continual recording of camera video (IR) and radiometric stream (temperature) of observed objects. The recording capacity depends of the hardware configuration (up to several weeks history).

Analysis of recorded temperature data

The system allows to perform the analysis of recorded temperature events and its time course in details. The system offers two independent ways of analysis:

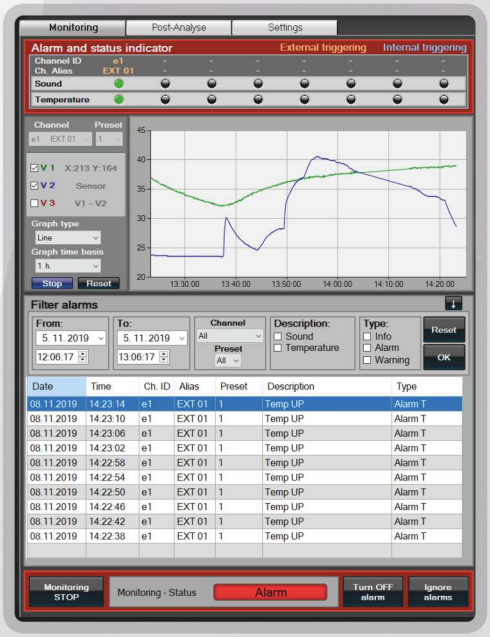
- visual – replay of thermographic stream as a video (IR spectrum)
- graphical – time course of selected points/areas temperature

The post-analysis of the recorded temperature event enables to determine an exact time of the beginning of an even and also its time course. The output of the analysis are graphs which display the behavior of temperature changes at any point of the observed object. In this way it is possible to analyze each area of picture from thermographic camera (up to one-pixel level).

An information/knowledge obtained from the analysis can be used for identifying of the causes of events and the reconstruction of its course, also for the designing of effective preventive action.

Features

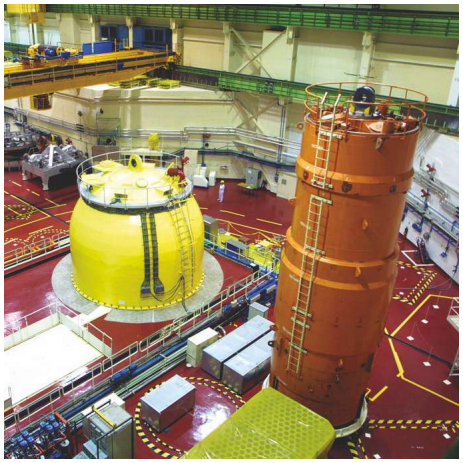
- connectivity for up to 24 camera channels
- ready for dual view cameras - infrared plus visible spectrum in one unit
- ready for PTZ cameras with presets of positions – for cost effective solutions
- up to 25 separate ROI's for each thermographic camera (ROI - definable detection zone)
- automatic detection - evaluation and indication of exceeded temperature limit values and temperature gradient
- ready for indoor and outdoor applications
- the ability to observe large objects and area
- mono, or multi-screen display
- long-term recording of video and radiometric stream (temperature data)
- analysis of recorded data - time graph of temperature progress and replay of radiometric stream as a video (IR spectrum)
- quick search of video/data sequence - by date, time or recorded event
- designed for 24/7 operation
- client/server solution - allows to design large systems with more operators
- intuitive and user-friendly interface



Where you can use the TT-Detector

TT-Detector can be used wherever is a need for early identification of undesirable thermal events, which involve a risk of damage to equipment due to its uncontrolled overheating (equipment failure, unpredictable course of a thermal process, human factor, etc.).

REACTORS
STEAM GENERATORS
ARMATURES



PUMPS
MOTORS
PIPES

SPECIAL
EQUIPMENTS
AND AREAS

TT DETECTOR

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