

PYROspy® basic

The non-contact, wear-free solution for monitoring fire hazards on conveyor belts



Initial situation

Crushing recycling material in shredding facilities can cause thermal critical temperatures on the conveyor belt. The process can create burning particles in the crushed material and rapidly present a huge fire risk.

If thermal critical material enters a bulk storage area, there is a high risk of a major fire. In order to prevent this, many waste disposal and recycling companies use the fixed Pyrospy® basic system for thermal monitoring of conveyor belt loading.

The solution

If a hot spot is detected, the system automatically sends an alarm signal, stops the belt and simultaneously starts the extinguishing process.

For particularly high extinguishing effectiveness, compressed air foam (CAFS) can be used in combination as a variant. CAFS creates a stable blanket of foam, which deprives the burning material of oxygen and extinguishes the flames. The powerful capabilities of the penetrating moisture result in lasting cooling, and a high level of safety with regard to back-burning is therefore also provided.

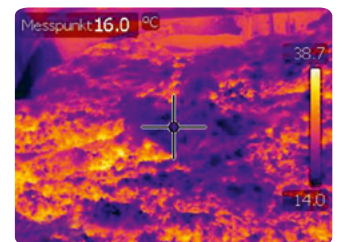
The "Stationary fire protection" product range provided by our system partner, Rosenbauer International AG, offers extinguishing systems designed for this purpose.

Benefits of PYROspy® basic

Pyrospy® basic is the all-in-one solution.

Unlike a basic spark detection system, which expects a visibly burning part with a high critical intrinsic temperature, Pyrospy® basic detects very low early warning temperatures.

Pyrospy® basic single-handedly provides more advanced early detection with its integrated, intelligent evaluation of thermal imaging measurement data. Temperature fluctuations depending on the time of day and season are taken into account.



The signalling values can be adjusted at any time to meet company requirements. For example, the alarm temperature can be set to a few degrees below the ignition temperature of the shredded material.

Sophisticated technology

The Pyrospy® basic system is equipped with special, high-quality components. These include an IR camera that measures temperature, a fast, robust, high-performance industrial PC and integrated switching outputs (fail-safe design) for direct activation of a central fire alarm system or event control (automatic extinguishing, belt stop, etc.).

The heart of the system control and the data evaluation is the intelligent PS Terminal evaluation software for early fire detection. It enables fast evaluation of hot spots, individual settings for signalling and alarm temperatures, the definition of hot spot resolution and activation of the signalling outputs.

The integrated air purge and cooling allows problem-free use in extremely dirty environments, e.g. with large amounts of dust and moisture.

If a fire is detected, Pyrospy® basic actuates simultaneous actions without delay. A foam extinguishing system can thus be activated directly. The belt section is stopped immediately and the automatic extinguishing process is triggered.



Pyrospy® basic can also provide information about imminent maintenance, as the heat of the shredded material provides information about the condition of the shredder cutting tool. The hotter it is, the worse the condition, because a blunt or defective cutting unit requires more energy for crushing and generates more heat as a result.

Expandable at any time

The optional extension by means of a small operator terminal close to the shredding belt or an operator terminal in the control room shows the thermographic condition of the section of the belt that is monitored and issues a warning when the plant approaches a dangerous temperature threshold. If necessary, the thermal imaging data can also be saved for quality assurance purposes.



The expanded Pyrospy® system with pan and tilt technology, and the patented procedure for generating thermal panorama images is used for early fire detection in large halls and for external storage areas where there is a risk of fire.

With a moving Pyrospy® system, depending on the site, areas of several hundred metres can be monitored with one system.

Further information is available at:

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Pyrospy® basic:

- Fixed infrared system with interated computer for analysing and evaluating the early fire detection
- Area of application: Non-contact conveyor belt and plant monitoring
- In the event of a fire risk, direct triggering of extinguishing systems
- Direct conveyor belt stop when fire alarm sounds
- Protection around the clock (24/7)
- Durable compressed-air-flushed twin camera casing for use in dusty areas
- Spherical head bracket for precise alignment with the detection area
- Modular expandable system
- Possible to connect to a central fire alarm system

About the company

Orglmeister Infrarot-Systeme (OIS) is an innovative company with over 20 years of experience in the field of infrared thermography and specialises in the development and implementation of automated solutions and early fire detection systems.

Today, OIS offers a comprehensive IR product range, from IR fire detection to a panoramic thermal imaging system. Countless references in the industry and in the recycling sector confirm the quality and innovative capacity of the products and system solutions.

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