ARAANI
VISION ON SAFETY

Unilin can count on SmokeCatcher to keep its manufacturing sites safe.

ABOUT UNILIN

At Unilin, a manufacturer of laminate, engineered parquet, luxury vinyl flooring and wood-based panels, sustainability is in the DNA. Not only is the company trying to keep the ecological impact of its manufacturing processes as low as possible, but it is also **focusing strongly on safety in the workplace. With the help of Araani's video smoke detection solution SmokeCatcher,** Unilin makes sure it is safe from fires, by spotting starting fires in time, even before they have a chance to develop.

Since October 2005, the UNILIN Group has been part of Mohawk Industries, an American company listed on the New York Stock Exchange. Mohawk Industries is the largest flooring group in the world in both residential and commercial markets.

One of the ways Unilin is successful in reducing the ecological impact of its manufacturing process, is by optimizing the heat energy management at its plants. More specifically, the company is burning all its wood milling and sawing residue in an incinerator. Unilin then recovers and uses the energy this releases to heat up the thermal oil which is used in the laminate and timber manufacturing process.

BRIEFING

DUST LEAKS CAUSE FIRE HAZARDS

However, this process comes with certain fire risks. Just like any mechanical installation, the incinerator system as well as the piping system that is used to convey wood residue onto the incinerator, is subject to wear and tear. As a result, dust leaks in the piping system are always a possibility. When dust escapes from the piping system and lands on the burner head, it can be the start of a fire, which could easily escalate into a severe fire incident.

"Dust leaks are something that we need to take into account every day," says Tiago Sieuw, Group Utilities and Facilities Manager at Unilin. **"We have had a few cases in the past where escaping dust led to starting fires on the burner head.**

Luckily, with no harm done. But these incidents have made us aware that **we need to be able to monitor these processes very closely, on a 24/7 basis, so we can react as fast as possible and take the required safety measures."**

SOLUTION

## MONITORING THE BURNER HEAD AND PIPING SYSTEM

Unilin was already using heat sensors to monitor the system. However, the previous fire incidents proved that this technology was not able to detect the fires in time. The company therefore started up an extensive market scan for a reliable early warning system.

"We finally met with Araani and it immediately was a great match," says Tiago Sieuw. "In fact, **Araani's SmokeCatcher video smoke detection was the only solution that was able to offer us reliable smoke detection in the challenging Unilin manufacturing environment."**

Unilin ordered SmokeCatcher video smoke detection installations in three different Unilin sites, viz. Bazeilles (France), Vielsalm (Belgium) and Wielsbeke (Belgium). A **visible-light camera with the SmokeCatcher video smoke algorithm installed on it now continuously monitors the burner heads.** The video image is continuously scanned for the presence of smoke and whenever a fire starts, SmokeCatcher immediately picks it up and generates an alarm.

"We now detect a fire very fast, even before it has a chance to develop," says Tiago Sieuw. "We are now more **confident** that our company is a **safer place**, and at the same time, we can make sure that our **manufacturing process is not interrupted.** This is not an idle luxury, especially when you realize that we employ about 1,000 people at our Wielsbeke site only, so the cost of production stops cannot be underestimated."
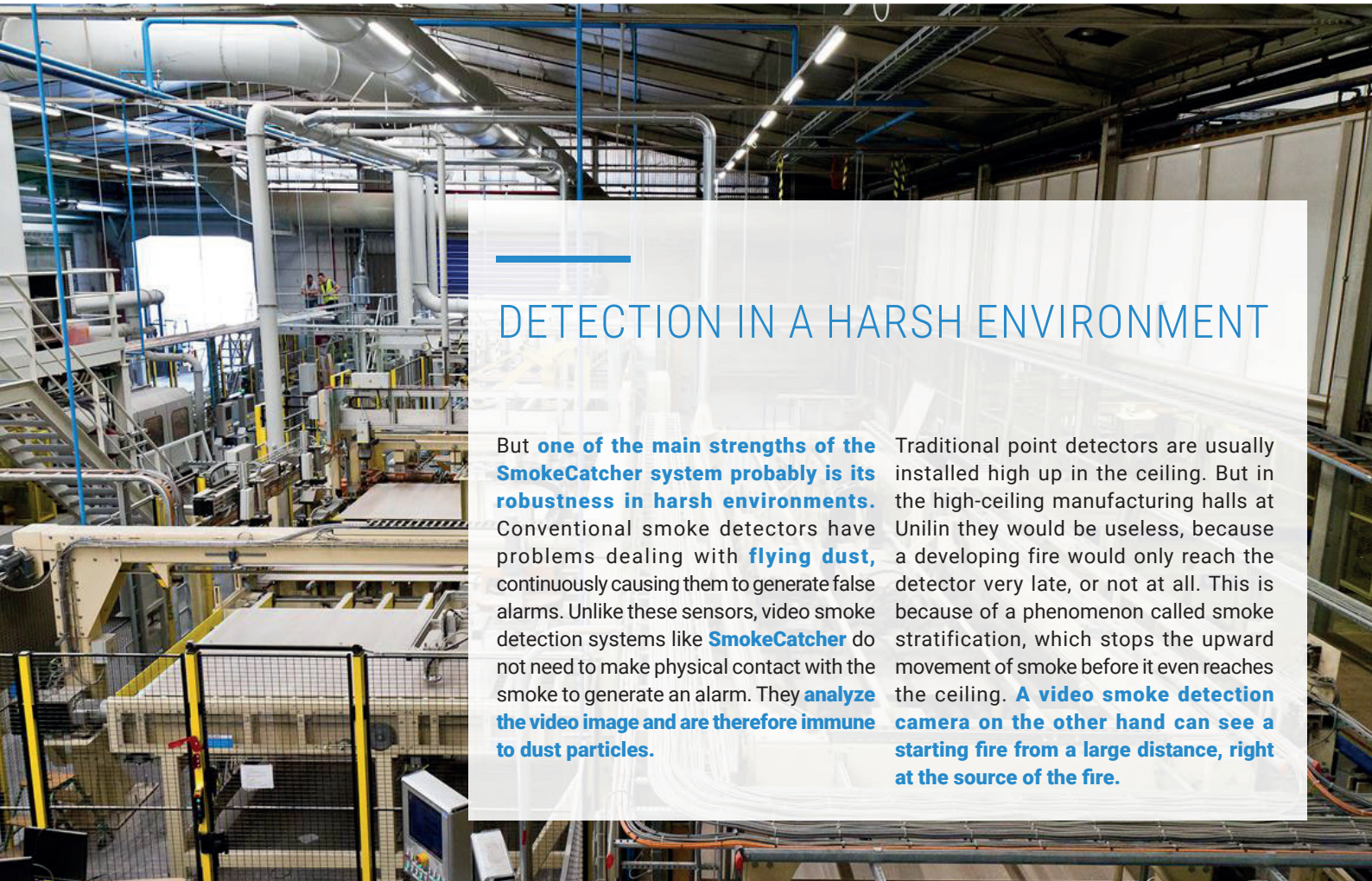
## DETECTION IN A HARSH ENVIRONMENT

But **one of the main strengths of the SmokeCatcher system probably is its robustness in harsh environments.** Conventional smoke detectors have problems dealing with **flying dust,** continuously causing them to generate false alarms. Unlike these sensors, video smoke detection systems like **SmokeCatcher** do not need to make physical contact with the smoke to generate an alarm. They **analyze the video image and are therefore immune to dust particles.**

Traditional point detectors are usually installed high up in the ceiling. But in the high-ceiling manufacturing halls at Unilin they would be useless, because a developing fire would only reach the detector very late, or not at all. This is because of a phenomenon called smoke stratification, which stops the upward movement of smoke before it even reaches the ceiling. **A video smoke detection camera on the other hand can see a starting fire from a large distance, right at the source of the fire.**

MONITORING CLOSELY, 24/7

The video image can be **continuously** monitored on a control room screen. Whenever a smoke alarm is generated, control room operators receive **a visual alert,** which allows them to take the necessary fire safety measures and even to go on site to have a look at the incident.

"That visual aspect is just invaluable for Unilin," says Christophe Chartier, Support Engineer at Unilin Bazeilles. "We can monitor our incineration installation 24/7 via our video screens and we know exactly when and where a fire can start. All of this information can be collected into a single Milestone video management system in our control room, together with the company's security camera feeds and process control information. There is no other fire detection system I know of that can do that."
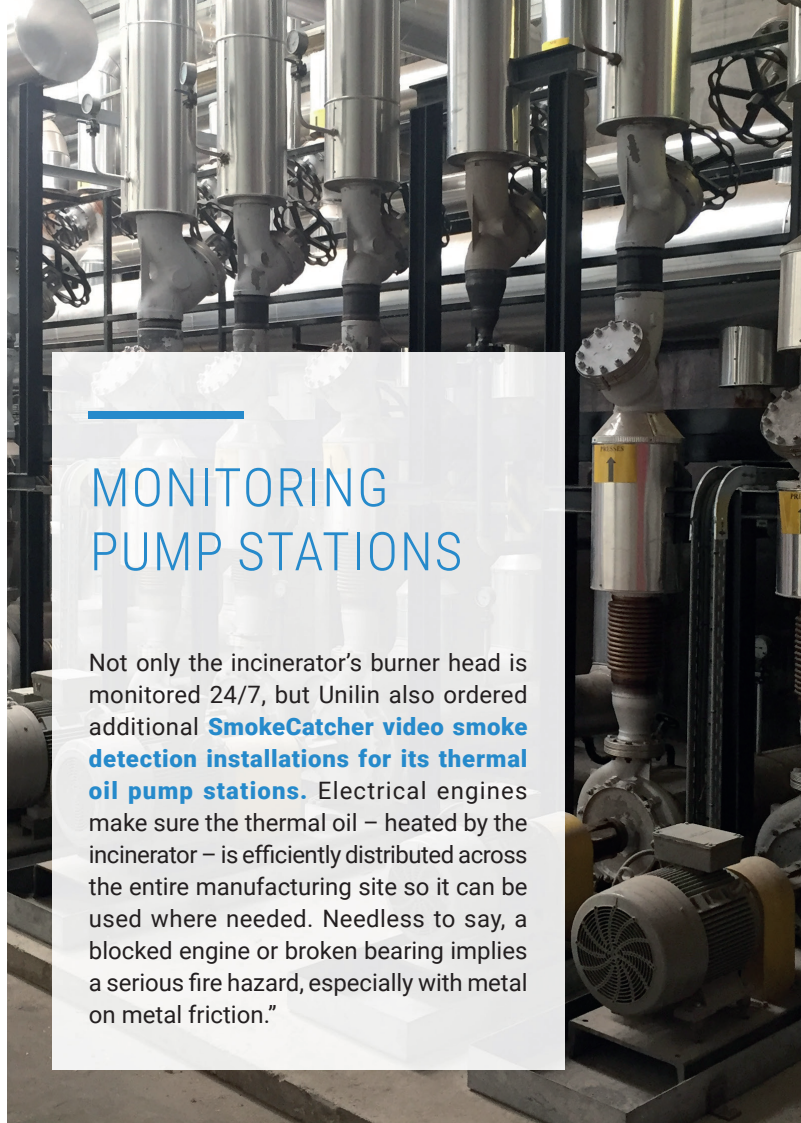
MONITORING PUMP STATIONS

Not only the incinerator's burner head is monitored 24/7, but Unilin also ordered additional **SmokeCatcher video smoke detection installations for its thermal oil pump stations.** Electrical engines make sure the thermal oil – heated by the incinerator – is efficiently distributed across the entire manufacturing site so it can be used where needed. Needless to say, a blocked engine or broken bearing implies a serious fire hazard, especially with metal on metal friction."

RESULT

PROACTIVE FIRE STATION

Tiago Sieuw: "I totally believe in SmokeCatcher. When we are confronted with dust leaks in our piping systems, SmokeCatcher immediately detects smoke development on the burner head. **Thanks to this fast detection, we prevent serious fire incidents from happening and we can save the company a lot of money."**

Christophe Chartier: "As the responsible for Unilin's video management system, I can immediately see the value of having a video smoke detection system. It helps us to be **proactive** and see possible fire hazards well in advance, even in the harsh conditions that are typical of the Unilin manufacturing sites."
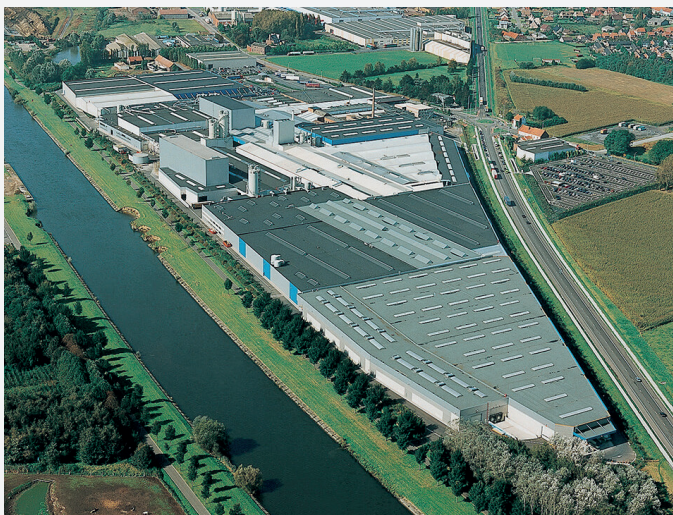
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ABOUT ARAANI

Founded in 2014, Araani is a Belgian high-tech company, specialized in video analytics for people, property and process protection. Araani is also the developer of SmokeCatcher, the company's advanced video smoke detection solution that has been designed to guarantee business continuity and fire safety for companies that operate in critical and demanding environments.

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