



SmokeCatcher is SAMCON's preferred video smoke detection solution for the chemical industry.

ABOUT SAMCON

There are only few industries where the impact of a fire outburst can have such serious consequences as in the chemical industry. SAMCON, a German supplier of camera equipment for hazardous areas, knows this as no other company. When it comes to providing a reliable smoke detection technology for customers in the chemical industry, they resolutely opt for Araani's SmokeCatcher software.

SAMCON Prozessleittechnik GmbH produces **camera systems for explosive and hazardous environments**. The company was founded in 1992 and is located in Lohra-Altenvers, near Marburg, Germany. SAMCON's CCTV applications range from simple monitoring to fully controllable digital video monitoring systems with voice transmission.

"We are **a true company of engineers** and always look for the best solution for our customers," says Steffen Seibert, CEO at SAMCON. "That's why Araani is such a good fit for us. We also have a strong foothold in the chemical industry and Araani's SmokeCatcher solution is a great match."

BRIEFING

LOOKING FOR AN EFFICIENT EARLY DETECTION SYSTEM

Things started to kick into gear when a fire incident occurred at a chemical plant of one of SAMCON's customers. **SAMCON already had a network of security cameras** installed at that plant, **but the camera systems were not equipped with any detection technology**, nor was there an **efficient smoke or fire detection system** in place to prevent the incident in time.

"The fire outbreak immediately resulted in a production stop, which was very costly for the company," says Steffen Seibert. "When we evaluated the smoke incident afterwards by viewing the camera images of the CCTV system, we could perfectly see the smoke originate and develop. But it was frustrating that the video images couldn't be used to set off the alarm system."

At the customer's request, SAMCON started extensive **research for a video-based smoke detection solution**. Via its technology partner Axis, **the company eventually discovered Araani**. By adding Araani's smart video smoke analytics onto the existing camera network, SAMCON was hoping to offer its customer a reliable and at the same time cost-effective smoke detection solution for the explosive chemical plant environment.

SOLUTION

SMOKECATCHER PASSES THE TEST



SAMCON engineers set up a test environment in order to evaluate the reliability and robustness of Araani's SmokeCatcher software. The algorithm was installed on a SAMCON ExCam IPM1145 camera and was compared to the performance of a conventional motion detection system. During the test, smoke was generated by a smoke machine and people were regularly walking in the camera's field of view. **The test proved that the SmokeCatcher software could reliably detect starting smoke and distinguish it from other movement patterns** (such as people passing by). No false alarms were generated during the entire test.

Next, a more extensive test followed at the customer site. Six cameras equipped with the SmokeCatcher algorithm were installed there. The on-site test resulted in an amazingly low false alarm rate of 0.5 %.

Steffen Seibert: "The tests have proven what the SmokeCatcher software is capable of. The fast detection, the low false alarm rate and the ease of installation convinced the customer to select Araani's video smoke detection algorithm for more than 60 cameras installed across the chemical plant's production floor."

HIGH-PERFORMANCE SMOKE DETECTION

"The fast detection, the low false alarm rate, and the fact that you can visually verify an alarm via the CCTV system: those are just the most obvious benefits of having a video smoke detection solution like SmokeCatcher installed," says Steffen Seibert. "What is also very interesting for companies in the chemical industry as well as for large facilities in other industries is the distributed architecture of the SmokeCatcher solution. This literally saves companies thousands of Euros."

SmokeCatcher is edge-based, which means that the analytics are installed on the actual camera ('the edge'), not on a central server. Thus, the video stream does not need to be transmitted via the network to get analyzed, and therefore it is not needlessly overloading the network. An edge-based architecture is also a failsafe system because the network and the central server are no longer the weak link in the communication chain.

"Installing the software on the camera throughout the network was a breeze," says Steffen Seibert. "You can literally install the analytics on 60 cameras at the click of a button, without having to make any changes to the network."

RESULT

FRUITFUL COLLABORATION

"The relationship with Araani has been very successful up to now," says Steffen Seibert. "The engineers and management at Araani are very easy to work with, very responsive to our questions, and, like ourselves, they are also flexible, opting for the best solution to solve a particular problem."

"For example, during the SmokeCatcher installation at the above-mentioned customer site, we had a few suggestions to adapt the user interface. The people at Araani were immediately acting upon it, much to our delight. Also during training, we learned a few very handy solutions to common problems, such as avoiding low-contrast backgrounds in the camera's field of view in order to improve detection performance. That's why I would recommend anyone teaming up with Araani to become a Silver or Gold partner.

It's really worth the investment."

SAMCON has many years of experience in the chemical industry and therefore knows its needs very well. According to Steffen Seibert, with the introduction of Araani's SmokeCatcher solution, the industry is now able to solve problems that could not be solved before.

This is first of all because **SmokeCatcher operates flawlessly in environments where chemicals, dust or vapor are present every day.** Unlike traditional smoke detection systems, **SmokeCatcher does not generate false alarms because of these phenomena.**

"Also, in terms of cost-effectiveness, SmokeCatcher truly provides maximum value with a minimum investment - unlike conventional smoke detection technologies," says Steffen Seibert. "Most chemical plants already have a camera network in place. So, by making use of the existing infrastructure, adding the SmokeCatcher analytics to the cameras is relatively easy and requires no changes to the network."



Steffen Seibert



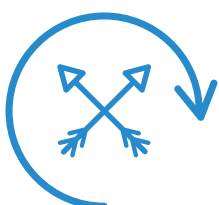
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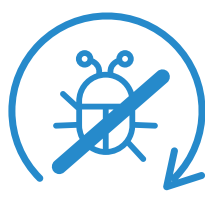
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SmokeCatcher®

Video Smoke Detection for critical environments



Fast



Fail-safe



Easy to integrate



Proven & tested

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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