Araani's SmokeCatcher Certified secures high-tech waste incineration plant

Biostoom Beringen is responsible for the waste treatment of the Belgian province of Limburg and the city of Diest. The company's waste incineration installation successfully converts more than 200,000 tons of waste into green energy. To make sure that the production process remains safe, Biostoom Beringen makes use of Araani's SmokeCatcher Certified video smoke detection solution.

On a yearly basis, residents of the province of Limburg produce over 120,000 tons of household residual waste and bulky waste. This is converted into heat and electricity by means of combustion in the environmentally friendly, high-tech plant in Beringen. The biosteam plant in Beringen is a state-of-the-art facility where waste is processed in an extremely professional, ecological and efficient manner.

Effective smoke detection in large indoor spaces

The plant began operations in September 2020, and since its first and basic design, fire safety was always a prime focus. With installations where temperatures can rise to 1,000 degrees Celsius, Biostoom Beringen wants to be sure that fire ignitions can be avoided. The installation of a high-performance fire detection system fits into the company's three-pronged fire safety strategy, including prevention, detection and suppression measures.

According to **Philip Peeters**, managing director at Biostoom Beringen, the company was looking for a robust, future-proof system that could be supported for many years to come. The company's processing area consist of a steam boiler, a turbine generator and a flue gas cleaning installation, an enormous capital of equipment that needs to be operational 24/7 to guarantee the supply of energy.

But the environment that needs to be protected posed quite a few challenges for traditional detection systems. The production hall is a tall space (40 meters high) that would need many detection points. It was clear that traditional detection sensors, installed on the ceiling – would not work: these sensors are only triggered when smoke makes physical contact with the sensor. But by the time that happens, it is usually too late.

SmokeCatcher Certified intelligent camera

Biostoom Beringen chose Araani's SmokeCatcher Certified video smoke detection solution, which makes use of CCTV security cameras and smart video analytics that can recognize initiating smoke and fire in the video image. SmokeCatcher Certified enabled the company to provide security operators with a clear image of the indoor spaces, reduce the number of detection points, and improve response time in case of incidents.

Unwanted alarms, due to false detections are a burden to the control room operator and often result in reduced alertness. Araani's SmokeCatcher Certified however makes use of pattern-based video analytics, which can accurately detect starting fires without generating unwanted alarms. Whenever the camera detects a starting fire or smoke, an alert is sent out to the control room. There, operators can immediately verify the incident and see which type of response is most appropriate. The visual nature of Araani's solution was of vital importance for Biostoom Beringen.

"In fact, we see our fire detection system as an additional virtual assistant, someone who hands us the right information at the right time," says **Philip Peeters**. "Thanks to its very early detection capability, Araani SmokeCatcher Certified allows us to react fast and we can win valuable minutes during these critical fire situations."

Fast detection, fast reaction

Thanks to a swift collaboration with Araani, the installation of SmokeCatcher Certified was completed successfully. The Araani technology is a critical part of Biostoom Beringen's integrated fire detection approach, which also includes other technologies such as flame detectors and aspirated smoke detectors.

And Araani's SmokeCatcher has already proven its value.

"During test runs of the new incineration installation, Biostoom Beringen was confronted with the build-up of hotspots, which were detected immediately by the Araani system. Our operators were able to intervene in time, before the heat build-up had the chance to become problematic. I am convinced that another type of smoke detection system would not have caught this in time."

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