TMGA protects its silos at risk of explosion with high-precision thermal technology

In the face of latent risks such as spontaneous combustion or explosive dust, highly sensitive thermal sensors and the Thermal Validation App provide preventive protection for the critical facilities of Terminales Marítimos de Galicia (TMGA), optimizing costs and complying with the strictest industrial safety requirements.

TMGA is one of the main operators of multi-solid bulk in the Port of A Coruña, handling more than 2 million tons per year. Its activity focuses on the storage, treatment, and transformation of solid bulk, including cereals, coal, fertilizers, agri-food products, minerals such as alumina or quartz, and conventional cargo such as glass, wood, or wind turbine components.

The facility covered in this success story is a strategic 6,750 m^2 space located in the outer port of A Coruña, Punta Langosteira. In an environment like this, where bulk operations pose latent fire risks due to spontaneous combustion of grain, the formation of explosive dust, and the presence of ignition sources, it is essential to have a technological solution capable of acting preventively, reliably, and accurately.

With the aim of anticipating these dangers, Ártabra Seguridad suggested that TMGA implement a thermal video surveillance solution in collaboration with the By Demes team and using technology from MOBOTIX, a leading German manufacturer of intelligent video surveillance systems.

THE SOLUTION: CUSTOMIZED TECHNOLOGY DESIGNED FOR THE MOST DEMANDING ENVIRONMENTS

The solution implemented consisted of the installation of four MOBOTIX S74 cameras with high-sensitivity thermal sensors and EN54-certified . Their modular architecture, combined with their small size, makes them a versatile and highly effective tool for industrial environments with demanding installation conditions. In this case, the cameras were integrated into housings certified for ATEX risk environments, a key aspect given the possible presence of explosive atmospheres.

Key data

Sector

Maritime logistics and port management

Customer

TMGA

by demes GROUP

Timeframe

2025

Products

MOBOTIX S74 & Thermal Validation App

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> Working with MOBOTIX has enabled us to offer the customer a robust solution tailored to the complex industrial environment in which TMGA operates. The accuracy of the thermal image and the embedded analysis capability have been key to ensuring a system that acts before a real emergency occurs.
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> “
>
> Ártabra Seguridad,
> *Engineering Team*

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MOBOTIX
BeyondHumanVision

Thermal technology allows very small hot spots to be detected, even at long distances, anticipating any fire before it develops. In a plant like TMGA's, where early detection can prevent large-scale operational and environmental damage, this ability to anticipate is essential.

The installation also incorporated the Thermal Validation App developed by MOBOTIX. This application, integrated directly into the camera, acts as an intelligent filter to reduce false alarms, validating only those thermal alerts that really pose a risk. This was especially important in this installation, as the constant movement of machinery and vehicles in the area could have generated multiple false alerts without this feature.

"Working with MOBOTIX has allowed us to offer the customer a robust solution adapted to the complex industrial environment in which TMGA operates. The accuracy of the thermal image and the embedded analysis capability have been key to ensuring a system that acts before a real emergency occurs," said the engineering team at Ártabra Seguridad.

DEVELOPMENT AND INSTALLATION CHALLENGES

From the outset, the system design required rigorous technical analysis. It was essential to accurately calculate the size of the hot spot to be detected and to define the viewing angle and exact location of each lens to ensure effective coverage with as few devices as possible. This preliminary planning phase allowed for an optimized and efficient installation, meeting the customer's requirements in terms of both coverage and operating costs.

The installation was carried out without complications, and only minor calibration and configuration adjustments were necessary after commissioning. Good coordination between the distributor By Demes and the local technical team at Ártabra Seguridad made it possible to develop a solution adapted to the specific characteristics of the environment, ensuring both the security and functionality of the system.

"The most important aspect of this solution is its ability to prevent, rather than just detect, any outbreak of fire. The cameras can be installed tens of meters away without losing accuracy, which reduces the total number of devices and ensures effective coverage in ATEX environments," says Arón López Boente, Sales Representative at By Demes.

"The support provided from design to implementation has been key to achieving a robust solution," says the technical department at Ártabra Seguridad.

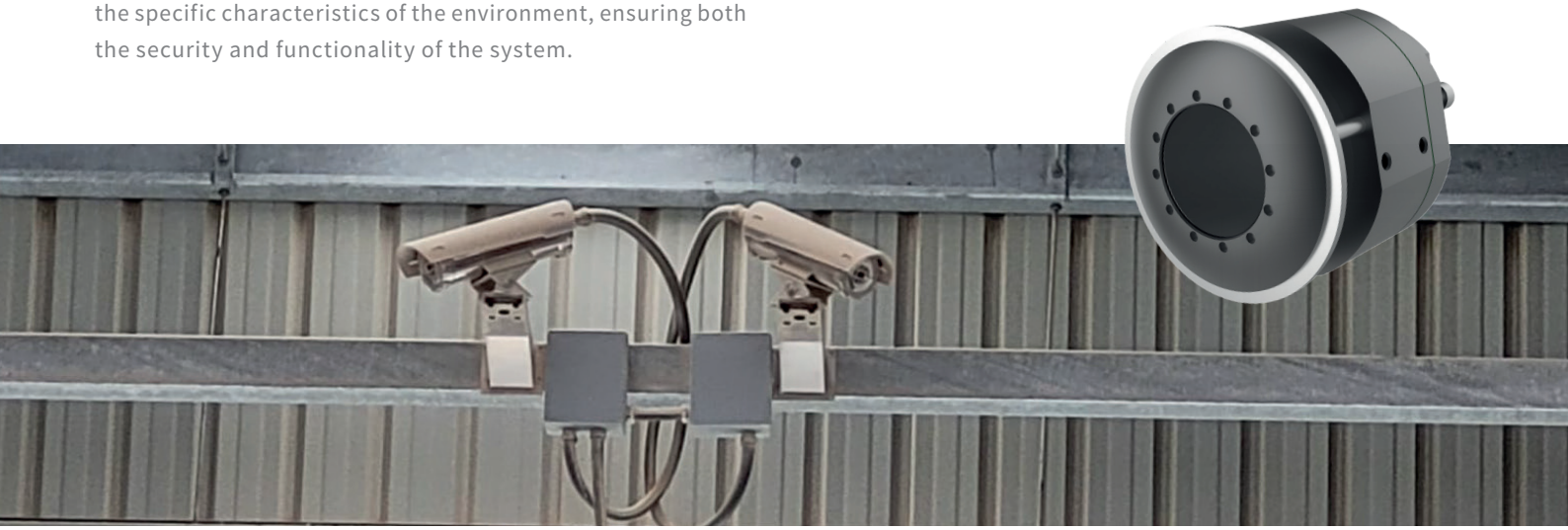
WHY MOBOTIX?

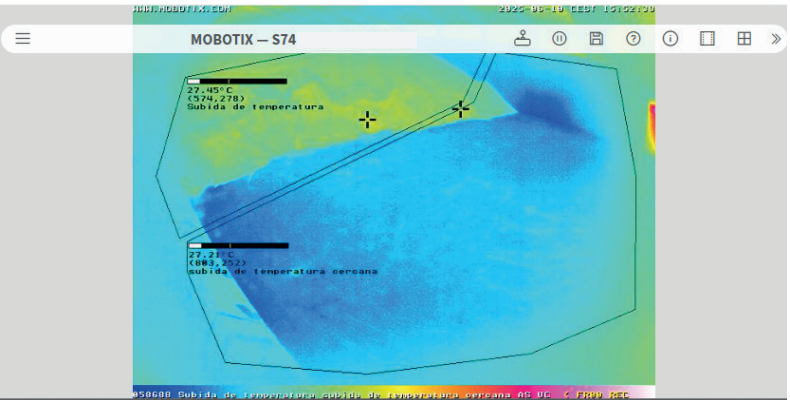
This technology was chosen for its ability to offer a robust, accurate, and flexible solution adapted to the most demanding industrial conditions. Among the decisive factors were the high precision of its thermal sensors, the possibility of performing embedded intelligent analysis or generating alarms without the need for external servers, and the robustness of its hardware, which comes with a five-year manufacturer's warranty.

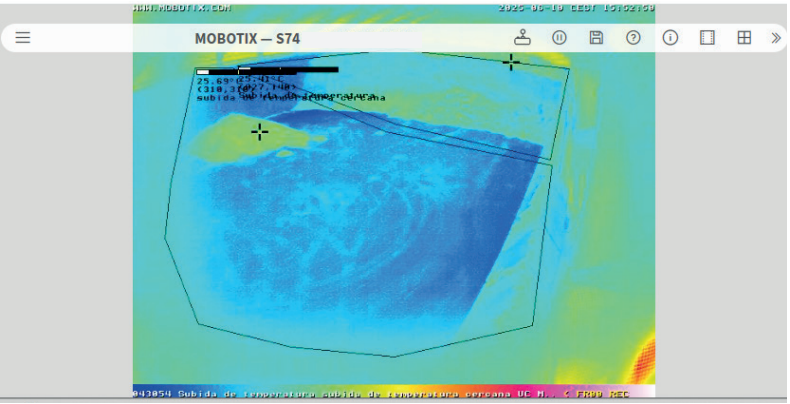
In addition, the solutions integrate seamlessly into ATEX-certified enclosures, an essential feature for deployment in potentially explosive environments. This capability was crucial to meeting the customer's strict safety standards, ensuring both compliance and operational reliability.

The decision to go with MOBOTIX was based on the proven performance of its thermal cameras: long-distance coverage, accurate temperature measurement and reduced operating costs by decreasing the number of devices required.

Thanks to this solution, Terminales Marítimos de Galicia has proactively reinforced the security of its facilities, effectively minimizing risks while investing in technology designed to meet both current demands and future challenges.







Scan the code and discover the Thermal Validation application!