



CONTAINER TERMINAL HERNE

SAVES 60,000 EURO PER YEAR IN OPERATING COSTS FOR PHYSICAL SECURITY

The Container Terminal Herne (CTH) is a model company in Germany's Ruhrgebiet industrial region. Here, on premises spread over almost 80,000 square metres, goods from all over the world are distributed to their final destinations. The security strategy previously in place, involving a guard system, was no longer delivering the desired results for the CTH, and did not contribute any improvement in terms of workplace safety and business processes. So, the CTH decided to introduce an AI-based video and software solution from the Regensburg manufacturer Dallmeier. With the system implemented by Gladbeck-based installer Dallmeier Systems GmbH, the CTH is saving more than 60,000 euro in operating costs every year.



At the Container Terminal Herne, an area of more than 80,000 square metres must be permanently in view.

From the point of view of security, two aspects of container logistics are particularly important: Firstly, protection of temporarily stored goods from theft and damage, as well as tracking of incidents to allow rapid, conflict-free claims management. And secondly, it is imperative for logistics companies to be able to always identify and understand hazardous situations. This enables the company to investigate incidents reliably and predictably, and to optimise workplace and operational safety. In order to overcome these challenges, the CTH tasked the installer "Dallmeier Systems" in Gladbeck with installing an intelligent and future-oriented video information solution.

Coordinating all contractors

After receiving the go-ahead, the first thing the experts at Dallmeier Systems had to do was establish routing continuity. For this purpose, the company tasked a local pipe cleaning business. In addition, a civil engineering company, also from the region, was engaged to make the connections between the line routing and the existing installation masts. Once these works were complete, the Dallmeier Systems personnel began connecting the cables to the installation sites and setting up the server infrastructure. Then they could install and commission the cameras. Based on this system, they integrated the camera analysis function and carried out functionality testing in a test phase. All installations, construction work and approval procedures were conducted in close cooperation with the CTH.



Besides protection for temporarily stored goods, the most critical aspect of container logistics is also workplace and process safety.

Only significant alarms incur costs

The system as implemented consists of 16 Panomera® multi-focal sensor systems, one PTZ camera, ten single sensor cameras, three IPS 10.000 recording systems and the "SEDOR® AI Professional" AI software from the German-based video technology manufacturer Dallmeier. The decisive feature for the efficiency of the solution is the combination of the camera and recording systems with the AI-based analysis software. AI analysis verifies incidents and events in advance, thus minimising the number of false alarms caused by animals, weather conditions or light reflections, for example. This in





turn substantially reduces the costs of detection and verification compared with conventional solutions, such as deploying security personnel.

“Recognition” according to IEC 62676-4 protects more than property

On the CTH site, large containers are unloaded from rail vehicles onto trucks. However, since large vehicles and cranes are in use, the hazard to personnel, equipment and goods is ever-present. To avoid accidents, the CTH is now able to analyse hazardous situations after the fact with the video system and prevent them from occurring in future. If an accident happens despite this, the data is used in the investigation and to preserve evidence. The Panomera® multifocal sensor technology implemented combines up to eight camera lenses with different focal lengths in one optical unit and enables a high minimum resolution (pixel density) of at least 125 px/m (“Recognition” as defined in IEC 62676-4). This resolution density is deployed over the entire area and all perimeter segments of the site. In this way, it is ensured that details are recognisable at all points of the site, and the CTH can submit the recordings as evidence in court if necessary.



Only 16 Panomera® systems and a few single sensor cameras are needed to cover 80,000 square metres with “Recognition” level resolution quality

AI classifies, humans verify and respond

The AI system transmits alarm messages to an external Emergency Call and Service Centre. If a person gains access to the company premises at a certain day and time without disabling the system with a key system, the video security system evaluates the alarms automatically, and sends them in real time to the Call Centre, which in turn initiates the necessary steps for investigating the situation. In the first step, a member of the call centre personnel addresses the person via a public address system which has also been installed by Dallmeier Systems. If the person does not then leave the premises immediately, the police are alerted.

Advantages also convince the workers council, involved at an early stage

“We are extremely satisfied with the system which has been set up by Dallmeier Systems. Besides the improved protection from theft and unauthorised access provided by the combination of AI and video technology, we also benefit particularly from the high quality of the video material in our efforts to improve safety in the workplace,” said Thorsten Kinhöfer, Managing Director of the CTH. “Of course, the workers council was included in the entire project programme from the outset. Since the objective is to improve the security of the site and protect it from vandalism and theft, and especially to guarantee the safety of our employees, we had their full support.”



Thorsten Kinhöfer, former FIFA referee and CTH Managing Director

Savings in infrastructure and operation

“We were also impressed by the cooperation with the Dallmeier Systems branch office in Gladbeck. Because of this proximity to the manufacturer, the entire project – from the planning through the coordination of all companies involved and up to the cooperation with the Emergency Call Centre – were coordinated smoothly and with no complications for us,” continued Thorsten Kinhöfer. “Apart from the immensely improved security and the important contribution to improving workplace safety and processes, we are also seeing evidence of financial benefits: Through the exceptional functionality of the multifocal sensor technology, we are achieving satisfactory results with a comparatively very small number of camera systems – with correspondingly positive effects on infrastructure and overall operating costs. AI reduces the commitment and thus also the costs for the Emergency Call Centre to a minimum. In total we expect to realise savings of 60,000 euros per year compared with the previous solution – with significantly better results and an additional benefit which did not exist before.”

