Integrated security at SPF Paker using Axis network cameras.

Fort Dialogue designed security and industrial video surveillance at SPF Paker's production sites in Bashkiria.

Organization:
SPF Paker LLC

Location:
Bachkortostan, Russia

Industry segment:
Industrial

Application:
Safety and security, production monitoring

Axis partner:
ITV, Fort Dialogue

Mission

Plant management was faced with the global task of providing integrated security for the entire company, including securing the site and protecting the lives and health of company employees, as well as monitoring production processes and finished product quality.

With regard to these tasks, 3 objectives were identified for video surveillance:

> immediate security of the site and onsite property
> protection of life and health of both company employees and visitors
> industrial surveillance of production processes

Solution

Industrial monitoring requires a high level of precision and detail, which is why these tasks required high-resolution IP cameras and serious analytics for the resulting image. The client therefore chose fixed and dome IP cameras from Axis.

HP data security systems were installed as the server, and the analytical system was based on Intellect software from ITV | AxxonSoft. The network was built using the company's own fiber optic telecommunication system. Cameras are powered via PoE.

Result

The first two stages of the project have been completed, including laying the network inside production buildings and setting up industrial surveillance. The next step is to install external and perimeter security surveillance and to upgrade the video data network.

AXIS COMMUNICATIONS

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"When selecting cameras, the client tested multiple models from several manufacturers. The key selection criteria were camera reliability and image quality. As a result, the client decided on Axis products, which did the best job of solving the set tasks and meeting the company's needs, in terms of both camera product range and camera quality."

Alexander Denezhko, Fort Dialogue.

Project parameters

Science and Production Firm Paker is the largest manufacturer of packer and anchor equipment for oil and gas producers in Russia and the CIS. The company's work is founded on the principles of high quality standards for finished products and environmental responsibility. Both principles are impossible without careful, multi-tiered industrial monitoring of production. A modern video surveillance system must be one element of this monitoring.

Project progress

When designing a video surveillance system, the installer must not only provide the client with the required functionality, but also minimize the number of camera models. As a result, the product includes AXIS M1114-E, AXIS P1344-E, and AXIS P1354-E Network Cameras, AXIS P3364-V and AXIS P3364-LV Dome Network Cameras, and AXIS Q6034-E PTZ Network Cameras. Two illuminator models (AXIS T90A01 and AXIS T90A21) were selected for night-time lighting.

The client's server solutions are built on HP products, which is why we chose to use equipment from HP to store the video archive. When selecting software to work with the video surveillance system, the client considered several options and ended up selecting Intellect software from ITV.

Network construction was divided into several stages. The first stage involved installing cameras for immediate surveillance of production processes. The second stage entailed installing surveillance cameras behind warehouses and auxiliary buildings. The third stage will be dedicated to installing security cameras to monitor the company perimeter and site.

Implementation

At the client's request, the existing fiber optic network at the site was used for the first two stages. All copper cable cameras were connected to telecommunication boxes with PoE+ switches to power IP cameras. A separate 220-V line was run only for IR illumination.

AXIS P3364-V Dome Network Cameras were installed inside test chambers used for metal fracture testing to record video and audio during the process. Panning cameras were used for remote monitoring of NC machine tools. This was done so that process engineers can remotely monitor machine tool settings and correct loading of blanks and tools. Fixed cameras were mainly used for general overview in warehouses, hallways, and auxiliary rooms.

Results and prospects

Implementing the first two stages resulted in the network load in some modules reaching its maximum, which is why the company network will be upgraded during the third stage. Further expansion of video systems will involve the current immediate security functions: external video surveillance cameras will be installed within the company site and beyond its perimeter.

Despite the fact that only two stages of the project are complete, the client has already gained a working tool: a fully operational industrial video monitoring system. The system includes around forty users who can observe devices and conditions in workshops and monitor production and industrial processes. Process engineers can now react much more quickly to problem areas, since all process adjustments can be made remotely in real time. Thanks to this modern IP solution, the company director can connect to the video system over the Internet from anywhere in the world, at any time of day or night.

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