



MOBOTIX

CASE STUDY

Network Video: Optimum Shipment Security

Europe's Largest Lime Works

7 million tons of lime are needed in Germany each year and approximately 25 % of this demand is met by Europe's largest lime plant in Wülfrath. This is where Rheinkalk GmbH, a member of the Belgian Lhoist Group, quarry



some 8 million tons of limestone in their Flandersbach plant each year and use it to produce 1.8 million tons of burned and more than 3 million tons of un-burned lime products.

The plant's biggest

customer is the German steel industry, which buys around 50 % of their production. The other half is produced for such fields as environmental protection and the building material and chemical industries.

Tradition And Know-how

Lime is indispensable in the production of steel, so in order to satisfy the needs of his steelworks in Duisburg-Hamborn, August Thyssen founded the "Rheinische Kalksteinwerke GmbH" in Wülfrath in 1903. Since 1997 Rheinkalk belongs to the Belgian Lhoist Group, the world's leading producer of lime. Naturally, Rheinkalk is able to profit from the extensive know-how the Group possesses.

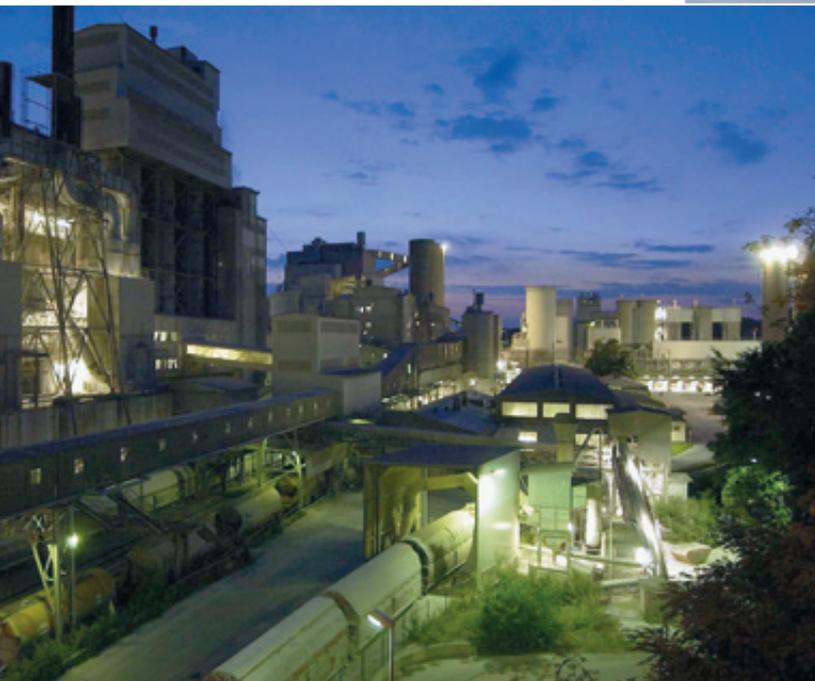
And the other Lhoist business units also take advantage of the more than one hundred years of expertise Rheinkalk has. Today, some 630 people are employed at this location.

320 Train Cars Of Lime Each Day

Every day, some 16,000 tons of lime products leave the Flandersbach plant. If this amount were to be transported exclusively by rail, it would fill about 320 train cars – a train that would be almost four kilometers long. However, since some of the lime leaves the plant by the truckload, logistics plays an important role, particularly the automated shipment process. Rheinkalk GmbH has placed its trust in the solutions delivered by Fritz & Macziol, a system supplier in Ulm, Germany and one of the leading suppliers of software, systems and services in Germany and Austria with approximately EUR 42 million in sales and 170 employees. An important element in shipment automation is the video monitoring of the shipments collected in the self-serve system – a task for which the MOBOTIX camera solutions are particularly well suited.

Security Vision Systems





The topper kiln (left) has a daily capacity of 3000 tons.

Registered, Weighed And Photographed

Pioneering And Versatile

Greater productivity with fewer employees – it is not only in the raw material and bulk goods industries that this principle provides for stable prices and stronger competitiveness. Not surprisingly, pioneering automation solutions are in high demand. Fritz & Macziol has made a name for itself as a general contractor in this field in particular. The company covers the entire spectrum of logistics automation – from planning and project development to the integration of complementary products and even to maintenance and software support along with 24-hour service and shipment outsourcing. The VAS® shipment system software, one of the tools they have developed, has also been implemented at Rheinkalk GmbH. This program links the technical software and hardware (scales, silo control, terminals) with the commercial components (order control, invoicing, controlling, etc.).

Unmanned And Independent

One of the advantages of VAS®: the entire loading and weighing processes as well as delivery processing, including the control of the gates, access controls and process controls, can be done by the truck drivers themselves. They simply log onto the system using special ID cards in credit card format. This so-called unmanned

self-serve shipment completion saves on personnel costs and allows shipments to be picked up trouble-free at night or during the weekend.

The system makes work a lot easier for Karl-Otto Geruhn, head of shipment at the Flandersbach plant: “Our fully automated silos recognize the cards and the data stored on them and perform only the loading process that has been ordered. Any attempts to load other quantities or products are automatically rejected.”

So it's a foolproof system? “Not exactly,” admitted the shipment manager. “If the ID card is misused or used incorrectly, I have to know exactly which truck was actually in the plant at the time. As proof, I need reliable images that can be used even in the court of law.”

The Complete Range Of Data And Information

The shipment system software also offers an exemplary solution to this problem – an integrated visualization application. A network camera from MOBOTIX automatically registers all the vehicles on the scales with their license plate numbers, the date and the time and assigns the photo with all the information stored on the ID card to the corresponding delivery note and the



MOBOTIX cameras automatically register the trucks on the scales (right).

calibration records. Thus, the shipment manager has not only the pictures, he has all the other data pertaining to the complete process. "So it's easy to find out quickly when a truck from any particular transport company brought a quantity of a product out of the plant. This means that any inconsistencies can be cleared up immediately."

Innovative And Professional

For Claus Jordan, manager of Sales & Marketing Industrial Applications at Fritz & Macziol, there was an important reason why his company decided to use Mobotix technology at Rheinkalk GmbH: "Consistent innovation and professionalism are the main reasons for our success as a system supplier. That's why we always keep our eyes open for products that offer the best solutions to meet our customers' needs. And the Mobotix network cameras certainly met our requirements."

In addition, the versatile application and the attractive price-performance ratio of the solution had those responsible at Fritz & Macziol convinced. "And we shouldn't forget," continued the Sales and Marketing manager, "that the camera is very robust and weatherproof, making it particularly suitable for use in the harsh environment of a quarry company. Another advantage is the fact that each camera has its own IP address. This way we can dial in from Ulm and render the services required or get a good understanding of the situation on location."



Trouble-Free And Reliable

It is no wonder then, that the system supplier uses the MOBOTIX solution for other customers in the raw material and bulk goods industries as well as in other applications, such as in building progress documentation. "We think that this technology is simply excellent," explained Claus Jordan. "And there has not been one malfunction yet. The cameras operate completely reliably." Shipment manager Karl-Otto Geruhn is also satisfied: "A system that I hardly notice because it fulfills all the requirements and works without a problem is always a good system."



VAS® delivers all the relevant information in an on-screen mask.



MOBOTIX Technology – Cost Savings in Every Aspect

High Resolution For Sharp Images

All MOBOTIX cameras are high-resolution cameras with integrated image storage and 960 lines (1280x960 pixels) resolution. The **stored image** thus contains 12 time more detail for creating zoomed sections of the image than regular cameras with 240 or 288 lines (CIF, 2CIF). This is why one single MOBOTIX camera with a 90° wide-angle lens is sufficient to monitor an entire room and yet provides more detailed images than traditional technology. The MOBOTIX Day/Night cameras feature zero maintenance with one color and one B/W image sensor.

Intelligent Storage Technology Uses Fewer DVRs

The new, decentralized storage technology pioneered by MOBOTIX reduces the number of recorders that store the smooth high-resolution video by up to 90%. 40 cameras store smooth video streams including audio on a single PC, each managing its own ring buffer and database. Intelligent search features provide swift access to the stored events. There is no software required for storing and managing video, eliminating license fees and the need for expensive software. Event-controlled recording and automatic increase of frame rates upon detecting movements drastically reduce the storage requirements.

Low Power Consumption Means Enormous Savings

Since MOBOTIX cameras are anti-fogging, do not require heating and only use 3 Watts each, power can be injected into the network cabling using standard PoE products, year round. This drastically reduces the amount of cables and the power requirements for backup power.

Integrated Telephone Features

All MOBOTIX IT and Secure models feature bidirectional audio support. The built-in microphone and loudspeaker are used for live audio transmissions and storage purposes. Voice messages with PIN confirmation and call forwarding via IP or ISDN telephony have been integrated as well. Using the switch outputs, you can switch lights or open doors from the phone or from the computer.

Robust and Well-Protected

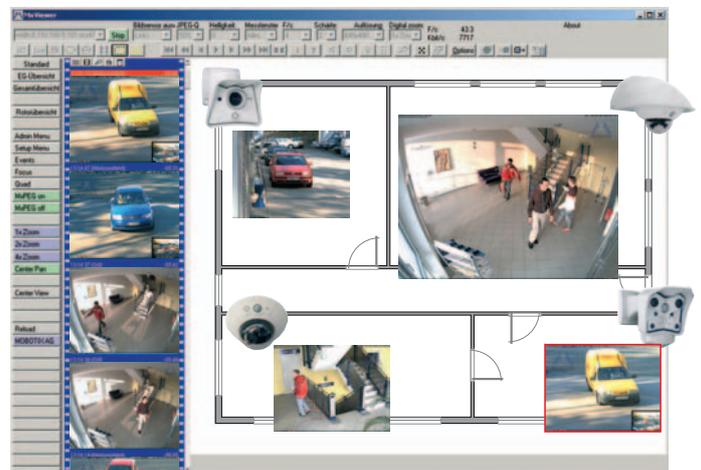
The fiberglass-reinforced housing is shockproof and the SecureFlex mount protects the network cabling as it completely conceals the cables (M12/D12 models). Weatherproof (IP65) from -30° to +60°C (-22° to +140°F).

High Return on Investment

Since the number of cameras and storage capacity are freely scalable and any kind of data connection can be used (ISDN, DSL, Ethernet, Wireless, GSM, copper, optical), MOBOTIX means high ROI, even years after installing.

State-Of-The-Art Technology

Developed and manufactured in Kaiserslautern, Germany, MOBOTIX produces image-storing weatherproof high-resolution cameras, including lens and wall/ceiling mount for as little as 598 EUR excl. VAT. To date, more than 100,000 cameras have been sold worldwide.



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