

Industry Sector Building Technologies Division

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Case study

The wind of change protected by Siemens in Spain

Siemens has recently completed a comprehensive and fully interoperable security solution for a wind turbine and blades manufacturer in the south of Spain, whose primary objective is to generate a type of sustainable energy that benefits both society and its stakeholders.

The wind turbine manufacturing company was established in the south of Spain to focus on environmental and technological advancement in wind power. With more than 20,000 square meters of installations, it is one of the most prestigious sites for technological innovation in the wind energy sector. The company is the foremost developer and manufacturer of wind turbines and blades in what is one of the least industrialized areas in Spain. The company uses cutting edge technology to manufacture wind turbines that are characterized by their simple system concept and high reliability, in order to achieve sustainable development whilst creating employment and wealth in an area lacking in industrial investment.

The security system supplied by Siemens was effectively a turnkey solution that manages security in the wind turbine plant from a single control room (supported by a back-up secondary control room). Future proofing of the system was an important consideration as plans are already in place to develop the existing plant which will involve extending the security system, integrating with the current set-up and following the same security criteria. The comprehensive project includes Sistrore CX video surveillance, SiPass access control and Intrunet intrusion detection systems, all integrated under a unique MM8000 danger management system. Siemens was involved in the engineering, design, installation and commissioning of the system and are contracted to provide preventive and corrective maintenance. The system comprises of twenty four fixed dome and minidome cameras linked to Siemens' Sistrore CX8 intelligent digital codec for high quality, full frame, full stream video transmission and storage via MPEG4 technology, the flexible and user-friendly access control SiPass system monitoring sixteen doors and enabling customized access rights by categories and a complete range of reports, the Intrunet intrusion detection system with thirty eight dual technology motion detectors covering the offices, emergency exits and building

surroundings, a seismic detector to protect the safety deposit box, three panic buttons to provide an immediate means of alerting the control room in the event of a problem in the building's reception area.

The manufacturing company has its own security centre on site, from which all buildings are monitored using the MM8000 danger management system. In the event of an incident, motorized dome cameras automatically locate the area in which the alarm has been detected, providing live images from that area to the Sistrore CX digital video recorder which is set up to record 24 hours a day. With the access control system, as soon as an identity card is passed through a door reader, providing access is approved, the system sends a signal to the intrusion detection system that deactivates the area to avoid an alarm. If access is denied through an attempted unauthorized entry, an alarm condition is generated and the access point immediately identified on the system. All alarm signals are fed through to the MM8000 DMS which provides central control and monitoring of the access control, intrusion and video surveillance systems, allowing the operators to benefit from a comprehensive graphical system overview: Icons placed on graphics display the current state of the equipment. Alarms and messages are clearly listed according to security-relevant priorities, so operators have all relevant information at a glance. In the case of an event, MM8000 guides the user step by step through predefined procedures.

The company is developing a new generation of wind turbine at its industrial centre and currently manufactures 1,200 and 1,500 megawatt models. Driven by the one of the most efficient technologies on the market, the wind turbine models are characterized by their simple concept and high reliability, and can convert 100% of the machine power.

For Siemens, it was particularly pleasing to be selected by such an environmentally focused company since for Siemens' social responsibility has been at the heart of its business operations for more than 35 years. Back in the 1970's Siemens introduced a company-wide, international environmental programme which continues to be refined and improved.

The programme has a goal based approach, with tangible targets and measures. An example is the 2005 Fit4More programme, which ended in April 2007. This saw the goal of introducing environmental management systems (EMS) at 85% of Siemens' sites which were identified as having a significant environmental impact, by June 2007. This was achieved worldwide, with EMS's introduced at 88% of sites.

In terms of Siemens Building Technologies, this environmentally responsible approach translates in many ways, from reduced packaging and cabling to detector recycling and the adoption of non-ozone depleting gases in automatic fire extinguishing systems. Power consumption is also a primary focus for industry in general and Siemens are constantly looking at developments in low power components, alternative power supplies and ways of employing and combining different technologies to reduce power use.

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