

Integrated building and process automation concept at new Sunways fab

# High-powered solar performance

For its new 30-megawatt mono- and multicrystalline solar cell production fab in Arnstadt, Germany, the high-performance solar cell supplier Sunways commissioned M+W Zander to handle the entire project, including the automation. Based on positive experiences on other projects, M+W Zander also here opted for Siemens as a platform for automation of the fab.

Just as in the semiconductor industry, solar cell production occurs under cleanroom conditions. Ultra-pure water as well as various gases and chemicals are also needed.

Sunways awarded M+W Zander with the general contract to install the buildings, facilities, utilities, etc. for the fab in Arnstadt. Official inauguration of the 3,200 square meter fab occurred on September 9, 2005. To meet the strong demand, a production expansion to 80 megawatts per year is already planned.

The automation concept of Siemens brings with it several advantages for M+W Zander, especially with respect to its ability to exploit synergies for other projects. The developed standards for the chemical cabinets, for example, can be used in the same or slightly modified form for other customers in the industry.

## Simatic as platform for factory-wide automation

Both the automation system of the cleanroom as well as the one required for producing ultra-pure water, for sewage treat-

## Photovoltaic technology – a growth industry

The photovoltaic industry is booming. According to the Solar Industry Association (USV), the German solar industry is growing more rapidly than expected. For 2005, the USV forecasts the market to double to approx. 300 megawatts at a sales volume of some 1.5 billion euros, and with about 25,000 employees in the industry. Improved governmental regulation in particular contribute to this increased demand.

ment and for the chemicals supply system with eight redundant chemical cabinets is performed with components from the Simatic family.

All technical supply and disposal systems have local control and are integrated in the central building control system via bus links. Simatic S7-300 controllers with Simatic OP270 operator panels are used for

the local HMI in the water section. The chemical cabinets each contain a Simatic S7-224 with Profibus module and a Simatic OP177 micro operator panel. All systems can be operated completely independently, and also feature central visualization integrated into the alarm system via the Profibus network.

The decision in favor of a Simatic-based integrated, factory-wide automation platform for the semiconductor industry as recommended by Siemens is already the standard in many projects today. This integration minimizes the planning risk and integration time while optimizing the operation of facility packets in critical system states. For maintenance staff, failure diagnostics, maintenance and extension are sim-

plified. The variable communication possibilities, high availability of components and services throughout Europe as well as the positive experiences made with Siemens on other projects also spoke for Siemens. ■

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