

Industrial Solutions and Services

For the trade press

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Siemens modernizes water treatment system of a thermal power station in Slovakia

The Siemens Industrial Solutions and Services Group (I&S) has received an order from Slovenské elektrárne, a.s., Slovakia, to modernize the water treatment system of the Elektrárne Nováky thermal power station at the Zemianske Kostolany location. The new treatment system will increase operational safety and reduce environmental pollution. To this end, the desalination plant for treating river water is being fitted out with a reverse osmosis system. This will make it possible for 80 per cent of the used water to be returned to the water circuit of the power station after treatment. The project is scheduled for completion by the end of 2007.

The stock company Slovenské elektrárne (Slovakian electricity works) located in Bratislava is responsible for supplying power in Slovakia and operates two nuclear power stations, 34 hydroelectric power stations and two thermal power stations.

The Elektrárne Nováky thermal power station, whose water treatment equipment is now being modernized generates electricity and delivers hot water and district heating to the cities of Prievidza, Nováky and Zemianske Kostolany as well as to factories. The power station takes the water it needs to generate steam from a river. Before this water can be used in the power station, it has to be treated and cleaned. For this purpose, Siemens is converting the existing desalination system into a reverse osmosis system. This

requires the installation of two systems. One is a reserve to be used when maintenance work is being done or if the main system fails. Each system has a flow rate of 80 cubic meters an hour. The reverse osmosis systems include automatic metering of chemicals for optimum water treatment. In addition, deposits on the membranes of the water treatment equipment are removed automatically. A measuring instrument automatically detects the pH value and conductivity of the water to make sure it has the right qualities needed for operation of the power station.

Siemens is also modernizing the existing equipment for filtering the river water. For example, filters for the first cleaning stage will be equipped with fittings for measuring conductivity, the pH value, turbidity and the water level in the treatment tank. After modernization, the filters will work and clean themselves fully automatically. The sludge left over at the end of the water treatment process is neutral and does not require any further processing.

Siemens is responsible for planning, modernizing and supplying all the equipment, including the power distribution system, on the one hand, and the instrumentation and the automation system, on the other. With the help of an I&C (instrumentation and control) monitoring system, all relevant water values such as pressure, temperature and flow rate in the entire water treatment process can be kept track of, monitored and, if necessary, altered.

Siemens Water Technologies delivers cost-effective, reliable water and wastewater treatment systems and services to municipal, industrial, commercial and institutional customers worldwide. The division "Water Technologies" is part of Siemens' **Industrial Solutions and Services Group (I&S)** which is a system and solution provider for industrial and infrastructure facilities and global service provider for the plant and projects business covering planning, installation, operation and the entire life cycle. In fiscal 2006 (to September 30), I&S employed a total of 36,200 people worldwide and achieved total sales of EUR 8.819 billion according to U.S. GAAP.

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