around EUR 100 in energy costs per year if he decides in favour of a 4-pole 2.2 kW motor of the efficiency class IE2 instead of an IE1 motor. The additional expenses can be clawed back in permanent operation and assuming around eight cents cost per kilowatt in around one year.

The customers are promised that replacement is facilitated by identical housing dimensions of the different motors. Whether and when the motors become economically efficient with their different degrees of efficacy can be determined by the customer himself using the free "SinaSave" software. Factors such as pressure, mass flow, conveying height, density and performance are also included in the calculation of a drive solution.

In this year’s trade fair Siemens exhibited a large number of innovations in low voltage switching technology and industrial power supply. This was supplemented by new products amongst controllers and industrial PCs, innovative remote access solutions for Teleservice and Telecontrol as well as extensions in the portfolio of RFID and code reading systems.

**Integrated industrial software**

Using the "TIA Portal" engineering framework, Siemens has integrated industrial software and automation technology and developed a complete solution for the entire product life cycle including the production process. The further development presented during the SPS IPC Drives Fair 2010 in Nuremberg is designed for efficiency, intuitive operation and future security and solves all engineering tasks of organisation and drive technology. This improved the competitiveness of customers and enabled them to take new products to market more quickly, explained Anton S. Huber, CEO of the Siemens Division Industry Automation. The newly developed software architecture is, according to manufacturer’s information, suitable both for beginners and experienced users. The TIA Portal forms the basis for all future engineering systems for project design, programming and commissioning of automation devices and drive systems of the Totally Integrated Automation Spectrum from Siemens. Examples of this are the new engineering systems Simatic Step 7 V11 for Simatic controls and Simatic WinCC V11 for Simatic HMI (Human Machine Interface) and process visualisation applications. The TIA Portal provides all engineering functionalities in a single framework with a uniform user interface.

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**ABBA**

"In China, for the world"

When ABB held the opening ceremony for its Quality Control Systems (QCS) and Web Imaging Systems (WIS) factory Shanghai, China, the company underlined that it will deliver first class products and solutions to consumers in Asia and around the world, addressing the demands of the global papermaking market.

Tobias Becker, head of the Process Automation Division, ABB North Asia Region and ABB China, said, "emerging markets such as China, Brazil, and Indonesia became growth engines of the global paper industry. Their rapid development is fuelling demand for all kinds of automation technologies and is establishing the latest industry trends. The commissioning of the new factory is ABB Group’s most recent move to optimise our global business footprint.

It allows us to promptly respond to both Asia and the global markets, and sustainably provide leading products and services to our global customers."

The new factory, located in the Shanghai Pudong New Area, covers 9,000 m². The ABB Pulp and Paper Business Unit will transfer its entire QCS and WIS manu-
facturing business from its Ireland and Finland facilities to the new location, making it the company's latest global manufacturing center.

ABB's new factory is located at Chuang Ye Road, Kang Qiao Town, Pudong New Area, Shanghai. Kang Qiao is also known as Shanghai Pudong Kangqiao Industrial Zone, it has an excellent location and enjoys easy transportation. The zone is just ten km from the city centre. The 40 metre wide Hunan Highway inside the zone links up with the inner-ring road and beltway. It will serve as the access to airports. Railways in Pudong will connect the zone with Waigaoqiao port area and the subway stations in the city. Kangqiao is also the gate of Shanghai Urban District to an international port which is about to be build: Yangshan Deep Water Port.

The opening ceremony started with a warm reception: At the entrance of the premises, the traditional paper making process was shown by Chinese workers.

Among about 100 guests were a lot of customers, as well as foreign and local media. Roger Bailey, Group vice president, Pulp and Paper Business Unit represented ABB's top management. He emphasised that ABB is well positioned with this strong move from West to East and pointed to heavy investment in R&D: a total of USD 1,300 million will be poured in five divisions.

Furthermore, ABB focuses very much on its service base as key to future success. Among 200 employees in China working for the pulp and paper industry, about 30 people are in the Service unit. Common tools and techniques enable ABB to deliver high value service to the mills. Roger Bailey emphasised that the service strategy is to diagnose, implement and sustain.

Tobias Becker acknowledged that the production line is still in transition. But Shanghai factory's first complete product was already shipped out to India at the beginning of November. The most challenging part regarding the new plant in Shanghai is the knowledge transfer, he said. All employees are recruited locally. But at the moment, engineers from Ireland are still on site to train their new colleagues. At the same time, local employees are sent to Ireland and Sweden for training.

Hu Xiao Xiong, from Pudong Foreign Investment Bureau and Huang Ping from Kangqiao Industrial Zone joined the ceremony and Huang also gave a welcome speech.

ABB is the technology leader in the global paper industry, providing the most comprehensive automation, measurement, and electrical equipment portfolio and solutions. ABB Pulp and Paper Business Unit invests over 10% of its annual revenue in R&D and has invented a number of leading technologies and products, including Induction xP, the innovative machine actuator, Optical Caliper Sensor, the revolutionary product for measuring sheet thickness, and Multi-variable cross-direction control, the unique QCS technology. The company is driving the development of paper automation technology with its advanced technology, solutions, products, and top class services over decades. Its full range of solutions, including electrical, open control, paper machine drive, collaborative production management, quality control, energy management, and web inspection, have been adopted by many large scale papermakers worldwide, such as UPM-Kymmenne, Stora Enso, APP etc.

QCS is the nervous system of the paper production line, decisive to the quality of paper products. ABB QCS controls production quality by analysing the paper's moisture, thickness, gloss, and other physical parameters with various types of sensors, helping papermakers reduce rejection rates and greatly improve economic returns. ABB WIS detects and reports defects, including holes, spots, and streaks, through its web imaging solutions. It not only guarantees product quality, but also helps papermakers adjust the operating process, to make right decisions of production and maintenance before problems arise, thereby remarkably improving production efficiency and economic returns.

China's paper industry has enjoyed fast growth in the past decade. In order to support this development, ABB began establishing the local Pulp and Paper team as early as 1994 and set up branches in Beijing, Shanghai, and Guangzhou. It boasts the most comprehensive talent pool and strongest service capabilities serving the paper industry in the country. By 2009, the supplier had successfully completed around 500 significant projects in China, building long-term partnerships with a large number of local and global paper companies including Hengen Paper, Nine Dragons Paper, Lee & Man Paper, and Huatai Group.

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