In the summer of 2008 Jiangsu Oji Paper placed an order with Voith Paper to supply a complete production line for high-grade woodfree coated and uncoated papers. In its 130-year history, this is the biggest investment the Oji Paper Group has made in China so far. Just two years later, in May of 2010, the so-called “China Stars” was successfully started.

Successful startup of Nantong PM 1

The Nantong PM 1 was awarded to Voith Paper in a total package as a Process Line Package (PLP). This is especially remarkable since Japanese paper manufacturers frequently purchase the individual components of their paper machines from different suppliers. However, the PLP concept offers Oji the advantage of saving resources in its own project team: Voith Paper takes over coordination of all sub-suppliers. “Nantong PM 1 is Oji Paper’s first new paper mill in China,” explains Muraji Nishi, project manager of the production line.

“To reduce the number of suppliers and thus the interfaces, we decided to award the contract for the supply of the complete Process Line Package (PLP) to Voith. This enabled us to handle the entire greenfield installation with very few people.”

Installation and startup were also simplified by the total package approach. Ultimately, only Oji Paper, its erection contractor and Voith Paper were involved. By means of these few interfaces, changes in the schedule or what is included in the delivery were coordinated more simply and quickly.

Less energy and fresh water, fewer costs

In addition, the Process Line Package offers Oji Paper the advantage that the strength of Voith Paper as process provider fully takes effect. Thus in the case of “China Stars” a concept was developed that is designed for reduced energy consumption and less use of fresh water. Pumps with frequency converters are an
example of this. Surely they involve a somewhat higher initial investment, but already after a short time of operation, they pay for themselves through lower energy consumption.

The machine concept was developed in close collaboration and tailored to the requirements of Oji Paper. From stock preparation to the winders, the technical specifications were worked out in many joint discussions and subsequently confirmed by tests at the Voith Paper Technology Center (PTC) in Heidenheim, Germany.

Until the decision in favor of the Nantong PM 1, Oji Paper was represented on the Chinese market by only one sales office in Shanghai. But the corporate group had already been intensively occupied for several years with construction of a paper mill in China so as to expand its presence in this market and to utilize the market potential even more. Fewer transport and personnel costs made on-site production economically interesting for Oji Paper.

**Ecological location advantages**

The city of Nantong in the province of Jiangsu was selected as the location for Oji Paper’s first paper mill in China. Nantong is at the mouth of the Yangtze River and offers optimal preconditions as a location due to the good infrastructure of the economic and development zone there and the proximity to Shanghai. “Due to its proximity to the Yangtze River, we can get the water from there. In addition, we have access to the sewer built by the municipal authorities to the Huang Hai Sea. From an ecological viewpoint, this is another advantage of this location,” says Hiroyasu Hayano, manager at Jiangsu Oji Paper.

**Long-term service support**

A special feature of the project is the proximity to the Voith Paper location in the Chinese city of Kunshan. This also simplifies collaboration after startup of the facility. Only a one-hour drive from

In addition, the delivery includes the entire process equipment such as piping, containers, tanks, pumps, mountings, instruments, steam and condensate system, machine ventilation technology with drying hoods and an extensive automation package with process control system (DCS), quality control system (QCS) and electrification.

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**NEW PLANTS**

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>>> Info: Nantong PM 1

The Nantong PM 1 produces fine paper and coated wood-free paper in the basis weight range of 40 to 190 g/m². With a wire width of 8,200 mm, it is designed for production speeds of up to 1,600 m/min. Along with stock preparation for processing the pulp delivered as bales, the facility consists of a paper machine with SpeedSizer and EcoCal calender, a rewinder, off-line coating machine, two Janus calenders and two winders.

In addition, the delivery includes the entire process equipment such as piping, containers, tanks, pumps, mountings, instruments, steam and condensate system, machine ventilation technology with drying hoods and an extensive automation package with process control system (DCS), quality control system (QCS) and electrification.
The Oji Paper Group with headquarters in Tokyo, Japan, was founded in 1873 and consists of Oji Paper Co., Ltd, as well as 193 subsidiaries and 84 affiliates. These companies are active in a wide range of business fields, including pulp and paper products. Additional business fields include the production of chemicals for the papermaking process or wood and tree-planting. Oji Paper produces graphic, board and packaging, tissue and specialty paper grades.
Nantong, the entire know-how of Voith Paper and quick support if needed are available here.

Since the time during and after startup is a big challenge for the newly assembled maintenance teams, Oji Paper concluded a mill service consulting contract for three years with Voith Paper for the PM 1. The professional consulting in planning the maintenance and service work and the supervision of repair work are decisive for quickly achieving production and efficiency goals. Thanks to the service contract and the cooperative collaboration of Voith and the Oji Paper Nantong maintenance team, effective service is assured along with high plant availability.

For support with maintenance and troubleshooting, a seven-member team from Voith Paper is on site, taking care of the mechanical, hydraulic and pneumatic systems as well as lubrication and automation. In addition, the grinding of rolls and service for suction, press and spreader rolls is taken over by the Voith location in Kunshan. For this, a framework agreement was concluded, which simplifies handling of these orders and offers additional economic advantages for Oji Paper.

**Prospects for the future**

Oji Paper is already planning the next expansion stages: Thus in the future the pulp required for paper production will no longer be imported, but rather produced on site in a new pulp mill at the Nantong location. The preparations for construction of this pulp mill, which will be designed for the needs of two paper machines, are fully underway. In order to ensure the supply of raw material, Oji Paper has acquired tree plantations in China. Also, the expansion of the paper mill with a second paper machine has already been approved by the Chinese authorities. These planning steps show how Oji Paper wants to strengthen its presence in the Chinese market to participate in China’s increasing demand for paper.

**Location**

The city of Nantong is not far from Shanghai, on the northern bank of the Yangtze River. One of the special features of the economically up-and-coming city is that many Japanese companies have their Chinese headquarters here. The infrastructure in Nantong is ideal: the city is linked by expressways in all directions and has a large seaport.

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