

A project under lucky stars

The timing of Yueyang Paper Co.'s new mill in Hunan Province was excellent. At its start, Yueyang took advantage of lower commodity costs and a favorable currency exchange rate. After start-up, financial pessimism in China diminished and the market is recovering nicely. "Honestly, we have been really lucky," says Guo Yongwei, Chief Engineer.



"The technology, the R&D ability, and the equipment manufacturing capacity of ANDRITZ met exactly the requirements of Yueyang Paper."

Guo Yongwei, Chief Engineer and Vice Commander, Yueyang Paper

Yueyang Paper Co., a member of the Hunan Tiger Forest & Paper Group, placed an order with ANDRITZ PULP & PAPER for a complete deinking line, stock preparation systems, and paper machine approach systems for their new mill in April 2008.

The fiber preparation technology prepares quality stock for two new 5.3 m wide paper machines at the mill producing environmentally friendly copy paper and premium offset printing paper. The furnish is a combination of deinked mixed office waste (MOW), mechanical pulp, and bleached kraft. In addition to the technology, ANDRITZ delivered control engineering, erection supervision, and start-up services.

Start-up of the production lines took place in July 2009. The new PM10 started operation in August. Currently, PM10 is being fed an 80:20 mixture of deinked pulp (DIP) and bleached softwood kraft. The deinking line cleans and brightens American sorted office paper and local office waste paper to about 82% ISO brightness.

The bleached kraft comes to the mill from parent company Tiger Forest & Paper, or from the market, depending on which is the most cost-efficient. ANDRITZ provided all the major production systems for Tiger's 400,000 t/y chemical pulp mill in Huaihua City, Hunan province (see story in SPECTRUM No. 19/1-2009). In addition, Yueyang Paper can also use high quality mechanical pulp from a 200,000 t/y mill in Hunan province, the site of ANDRITZ's first P-RC APMP line in 2003 (see story in Issue 2/2004 of FiberSpectrum) instead of bleached kraft.

The second machine, PM9, is furnished with a 70:30 mixture of bleached hardwood and softwood kraft pulps. ANDRITZ also pro-

vided stock preparation equipment and approach systems that refine BSK and BHK, and prepare the stock for the two PMs.

"Generally speaking, the whole process from technical negotiations and international bidding to erection and commissioning went quite smoothly," says Guo, who is also the Administrative Vice Commander of the Yueyang Paper and was the project director during construction. "This all was realized even though the project time was short."



ANDRITZ delivered totally three SelectaFlot flotation stages to obtain maximum final pulp quality. ▶

Taking a DIP! ANDRITZ's Friedrich Hoppl, the on-site leader of the start-up team, explains that both professional and personal friendships have developed as a result of the deinking project.

Friedrich Hoppl, on-site leader of the start-up team from ANDRITZ



ANDRITZ PULP & PAPER supplied a complete deinking line, stock preparation systems, and paper machine approach systems for Yueyang Paper's new mill.

"Most important part of the whole project"

"Generally speaking, the DIP line is the most important part of this total project," says Zhou Xunfu, Project Manager of the DIP project. "The runnability of the line and quality of the deinked pulp is critical for the paper machine. For this reason, ANDRITZ is a very important partner."

Zhou notes that the line is "extremely easy to operate. We were able to make quality pulp from the start-up and we only need four operators per shift to run the entire line. The operating efficiency is really high."

According to Zhou, the equipment has been running well since start-up in the summer of 2009. The guarantee run was completed in March 2010, and customer takeover of the entire line occurred April 1, 2010. "Despite some minor problems at start-up, we would already rate the system as perfect," Zhou says. "The quality of the pulp helps us meet all the requirements of PM10 and the older paper machines. The ANDRITZ team has been patient and dedicated. For me, it has been truly a pleasure to listen, learn, and even challenge their expertise."

“The runnability of the line and quality of the deinked pulp is critical for the paper machine. For this reason, ANDRITZ is a very important partner.”

Zhou Xunfu, Project Manager of the DIP plant from Yueyang Paper Company



Liu Yiwen, Vice Director of the DIP Department, has similar feelings. “Based on the way the line is running now, we are confident of success in the performance test. We know that, under the supervision of ANDRITZ experts, we can achieve all the guaranteed performance very soon.”

“A fantastic group to work with”

“Yueyang really has a nice team here,” says ANDRITZ’s Friedrich Hoppl, the on-site leader of the start-up team. “Friendships have been developed, not only professional, but personal ones. They are more than customers. I would say that we are colleagues. All the time we keep open communications and dialog.”

Chen Zuqing, the Project Manager for the DIP plant from ANDRITZ China, also remarked about the excellent cooperation. Chen was responsible for overseeing the locally manufactured equipment, while his colleague, Gerhard Knes from Austria, was Project Manager for the engineering and imported equipment.

“I feel that the confidence, comradeship, and expertise we have at ANDRITZ most certainly can be seen and felt by the customer,” Chen says. “This leads to progressive and efficient operations, no matter how challenging.”

The choice of ANDRITZ

“Why did we choose ANDRITZ as the supplier for our new deinking system?” asks Guo. “First, it is supplying the most advanced technology for deinking systems with references around the world. I visited the deinking line for our customer Shandong Chenming, as well as the mill in Jiangxi Chenming, where the DIP line is more or less the same that we wanted to build. These installations really gave us a good impression.

“The technology, the R&D ability, and the equipment manufacturing capacity of ANDRITZ met exactly the requirements of Yueyang Paper. And finally, ANDRITZ could offer a really nice price-to-performance ratio. “Based upon the project and the performance, we made the right decision.”

A new project already in plans

“We are already planning a 500,000 t/y increase in our production,” Guo says. “At the present, we are confirming the technical concept for the project and making the general layout. Our longer range plan is to build this mill to a base of 1.5 million t/y papermaking capacity.”

He also hopes that also ANDRITZ continues its R&D work in energy savings. “Savings



“The reject of coarse and MC screening is more or less free of fiber. We can reach a yield over the whole line that exceeds 70%.”

Gerhard Knes, Project Manager from ANDRITZ (right) with Chen Zuqing, Project Manager for the DIP plant from ANDRITZ China

SCOPE OF SUPPLY

3-loop deinking line with 500 t/d capacity:

- Bale handling
- FibreFlow® drum pulper
- DuoClean system
- ModuScreens for coarse and fine screening
- SelectaFlot deinking
- Thickening/dewatering
- RotoWash de-ashing
- CompaDis dispersing
- HC bleaching
- Sludge dewatering equipment
- MC pumps
- Advanced basic engineering
- Erection supervision
- Training
- Commissioning
- Start-up and optimization services



▲ ANDRITZ installed a second cleaning line to help Yueyang meet its high targets for dirt speck removal.

in power, steam, and water consumption really help the industry reduce costs, and make our products more competitive in the market. Another consideration for us is how to further reduce effluents and emissions. The Chinese government is getting stricter and this brings a lot of pressure to pulp and paper companies.”

In China, the older standards for effluent measured four variables. The new standard has grown to eight items. “There are differences in the COD concentration,” Guo says. “The old standard was 410 ppm (parts per million). Then it was reduced to 150 ppm, and it will be further reduced to 90 ppm in the standard that goes into effect in 2011.”

Nearly 20 years of cooperation with ANDRITZ

Guo says that he has been cooperating with ANDRITZ since 1991. “The first project I was involved in was the first poplar APMP line,” he says. “Notably, it was the first APMP line in China.”

ANDRITZ sent an expert from their laboratory in North America to Yueyang Paper. “He worked here with us until we found the roots of the problems and solved them completely,” Guo says. “Thanks to this improvement, we were awarded second prize by the National Scientific and Technological Progress.”

Much hope on green paper production

According to Yueyang, using recycled deinked pulp for high-grade copy paper

production is a big challenge in China. “We are applying for a certificate for green products from the State, as we are using deinked pulp for high-grade environmental-friendly copy paper.” Guo says. “We can also use the green paper concept in marketing, but the technology needed for green paper is new and high, it is a real challenge.”

Overall, Guo and Yueyang Paper are extremely satisfied with the project. The ANDRITZ line is running smoothly, and it needs less operators. “It will be really nice as we control the consumption of energy, water, and raw materials as per design in the near future.”

FIND OUT MORE AT www.spectrum.andritz.com

ANDRITZ team members give...thumbs up! From left to right: Chen Zuqing, Gerhard Knes, Friedrich Hoppl, Chen Fang, Marketing Director, Heinz Kleinbichler, Start-up Engineer, Ewald Halbedel, Process and Control Engineer, Alexander Gscheider, Start-up Engineer and Huang Zhao, Sales Engineer. ▼

