

# EMPIRE OF THE SUN

Sun Paper Holding Laos started up its 300,000 t/a greenfield pulp mill near the small town of Xepon, Savannakhet Province, Laos, last year after just 20 months from the signing of supplier contracts. ANDRITZ was chosen to supply various key technologies for the project.







Sun Paper chose the location in the east of the Savannakhet Province of Laos some 10 years ago mainly because of its excellent climatic conditions for the growing of eucalyptus. The sun often beats down relentlessly in this part of the world, and when it rains, it rains in torrents, making perfect conditions for fast growing fiber. In August 2010, the company formed Sun Paper Holding Laos Co. Ltd., and invested in 100,000 ha of forest land and created an advanced

breeding base with a capacity to grow 10 million trees a year. This was the first part of its "Forest-Pulp-Paper Integration" project in the country and represents Sun Paper's first expansion outside of China.

Liang Hongjin, Pulp Mill Production Director, Sun Paper Laos, says, "This region of the country has an excellent investment environment, with huge areas of land available for plantations. We obtain

wood from our own plantations, as well as local farmers and we also import acacia chips from Vietnam as the border is really close to where we are located."

#### AN IDEAL LOCATION FOR A PULP MILL

The next phase of the Forest-Pulp-Paper Integration scheme began with the planning of the 300,000 t/a pulp mill in 2016. The mill is ideally situated to supply products to China and South East Asian

Gong Tieren, Fiberline Sales Director, ANDRITZ, with the Sun Paper production team in front of the dryer at Laos



LIANG HONGJIN  
Pulp Mill Production Director  
Sun Paper Laos

**"ANDRITZ supplies some of the best performing technologies and most reliable equipment for pulp mills."**



countries, as it is close to Vietnam and its well-placed sea ports.

Discussions were entered into with ANDRITZ in the second half of 2016, and Sun Paper ordered a number of key technologies for the new pulp mill in Laos, including equipment for the woodyard, fiberline, pulp drying, recausticizing plant, and methanol liquification. Importantly, Sun Paper also ordered an ANDRITZ HERB recovery boiler, now the largest of its kind in the country.

Liang Hongjin says, "The main reason ANDRITZ was chosen as one of the major suppliers for this project in Laos was because at Sun Paper we already have a lot of experience with pulp production at our two sites near our headquarters in China. It is recognized that ANDRITZ supplies some of the best performing technology and most reliable equipment for pulp mills."

The project itself kicked off with contracts being signed in January 2017 and the first deliveries taking place later in the year. In total, some 2,000 people worked on the project with 100 of Sun Paper's employees coming in from China.



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The horizontally fed HHQ-Chipper has a unique chipping geometry that enables it to produce superior quality chips at the highest production throughput.





ANDRITZ supplied the mill with the largest HERB recovery boiler in Laos with a capacity of 2,200 tds/d, in order to secure safe and reliable operation.

"The major challenges associated with the project were mostly to do with the weather," says Liang Hongjin. "It can rain really hard here making the roads virtually impassable due to floods and mud. All the equipment for the project had to come in via road from ports in Vietnam but, although there were a few scheduling problems, we overcame the hitches without too many problems."

**THE HERB RECOVERY BOILER – SAFETY, EFFICIENCY, STABILITY**

Environmental and safety concerns were at the top of the list when it came to choosing the best technology for the Laos project. The recovery boiler was centrepiece to these concerns and, from

the outset, Sun Paper was looking for the best and most efficient technology. ANDRITZ supplied the mill with the largest HERB recovery boiler in Laos with a capacity of 2,200 tds/d, but it was much more than simply capacity the mill was looking for. Fei Da, Recovery Island Director, Sun Paper Laos, explains, "We needed proven recovery boiler design and operation for this project in Laos, as we needed to be certain of safe, reliable, and stable operation, especially since we are in such a remote location, and the recovery boiler would be our only source of power.

"We knew that with ANDRITZ HERB technology, though more expensive than other local suppliers, we would be getting

the safety, high efficiency, and ultimate reliability that we needed."

Fei Da adds that ANDRITZ did an excellent job in the supply and start-up of the recovery boiler, "This was a fast track project, and in challenging conditions. There was only 20 months from handshake to first black liquor firing. The attitude of the recovery boiler team was really impressive; they were extremely professional and nothing was ever too much trouble, including working on weekends and often late into the night."

The extra energy the mill produces is currently being utilized by the national grid in Laos, but there are major plans for



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**FEI DA**  
Recovery Island Director  
Sun Paper Laos

expansion at the mill, with paper machines already on order and a major project for a recycled pulp line already underway.

**PULP DRYER – A REPEAT ORDER**

The pulp dryer supplied by ANDRITZ at the Laos mill was a repeat order of a similar dryer installed at Sun Paper's headquarters in China. A complete pulp drying line with a TwinWirePress pulp machine, airborne dryer, cutter-layboy, and bale finishing system was supplied. In addition, ANDRITZ supplied equipment for broke handling and process water treatment as well as the control systems for the dryer, cutter, and baling line.

Zhou Yang, Pulp Dryer Manager, Sun Paper Laos, says, "We were very pleased

with runability and stability of the first pulp dryer we had installed from ANDRITZ in China; it made good sense to go ahead and order another one for Laos.

"Commissioning and start-up went very well; as we ramped up, we were having some problems at certain speeds, which ANDRITZ has been working on."



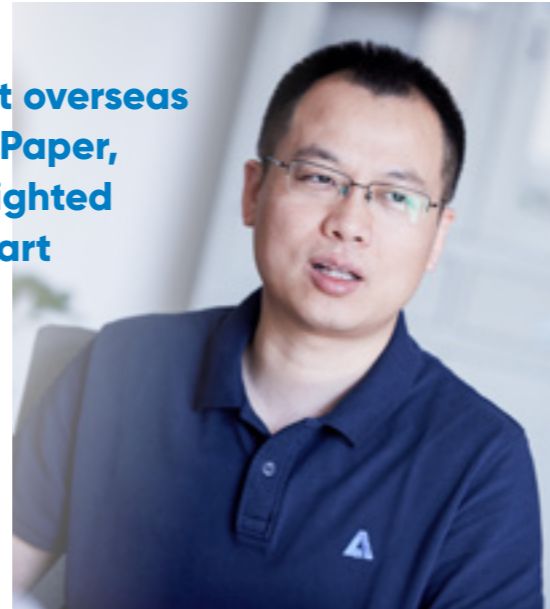
The pulp drying line consists of a TwinWirePress pulp machine, airborne dryer, cutter-layboy, and bale finishing system.





**GONG TIEREN**  
Fiberline Sales Director  
ANDRITZ

**"Laos is the first overseas project for Sun Paper, and we are delighted to have been part of this."**



## SCOPE OF SUPPLY

### WOODYARD:

Main process equipment including HHQ-Chipper, with a capacity of 250 m<sup>3</sup> sub/h, chip screening and bark processing.

### FIBERLINE:

MC equipment for the complete fiberline as well as screening equipment and ozone bleaching stage.

### RECOVERY BOILER

The largest HERB recovery boiler in Laos with a capacity of 2,200 tds/d, a steam temperature of 480 °C, steam pressure of 84 bar, and steam flow of 96 kg/s.

### PULP DRYING

A complete pulp drying line with a TwinWirePress pulp machine, airborne dryer, cutter-layboy, and bale finishing system.

### RECAUSTICIZING

A LimeWhite white liquor filter for the recausticizing plant.

### METHANOL LIQUEFACTION

A methanol liquefaction system to produce additional fuel for the recovery boiler and lime kiln from gases from the evaporation plant.

Helmut Senft, Director of Project Management, Pulp Drying for ANDRITZ says, "There were some real challenges during this project, particularly when it came to producing different pulp grades than those produced on the original dryer supplied in China.

"Finally, we made the performance test run near the end of 2018 and achieved all the guaranteed parameters."

The pulp dryer handles 825 admt/d of dissolving pulp and 1,050 admt/d of

bleached market pulp made from eucalyptus and acacia.

### READY FOR THE FUTURE

The area around the mill at Laos is a hive of activity as Sun Paper gets ready for the next wave of expansion and additions in the shape of paper machines and a recycled pulp line.

Ding Xingban, Fiberline Manager, Sun Paper Laos, says, "From the HHQ-Chipper in the wood yard to the pulp dryer and bale finishing system, we are delighted with

how this project has gone. In the space of around 16 months, this mill in Xepon has gone from bare ground to start-up, with everything now running well.

"The ANDRITZ team has been excellent in the project delivery and most of all in the way they share knowledge; the sales and service people are always coming to us, presenting new technology, or opening us up to new market ideas."

Gong Tieren, Fiberline Sales Director, ANDRITZ, concludes, "Working with Sun

For the recausticizing plant, ANDRITZ delivered a LimeWhite white liquor filter.



The ANDRITZ airborne dryer handles 825 admt/d of dissolving pulp or 1,050 admt/d of bleached market pulp.



### CONTACT

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