

# READY

## for the next challenge

With construction completed, Montes del Plata mill in Uruguay is intently focused on running and maintaining a world-class market pulp mill. In addition to delivering the production technology, ANDRITZ is now supplying millwide maintenance services as part of a long-term full-service contract.

Arauco and Stora Enso took advantage of the decision by the Spanish company ENCE to sell its assets in Uruguay near Conchillas (Colonia region) and formed the 50-50 venture known as Montes del Plata. This gave birth to a greenfield market pulp mill in Punta Pereira, which has as its goal to be a shining example of high technology, sustainable production, environmental safety, community involvement, and effective maintenance outsourcing.

Montes del Plata manages over 145,000 ha of forested lands in 11 departments of Uruguay, including plantations on third-party lands, that secures the raw material supply for the 1.3 million t/a bleached eucalyptus mill. The site on the Rio del Plata (River of Silver) was ideal for easy transport of logs and pulp.

ANDRITZ was selected as the main technology supplier for Montes del Plata – providing the woodyard, fiberline, pulp drying plant, chemical recovery island, and power plant on an EPC basis. When the mill became operational in 2014, it was calculated that it increased the GDP of Uruguay by 1.7% compared to 2012. It represents the largest

and most important private investment in the country's history.

### A shift in thinking

Héctor Araneda, Mill Manager, is leading his team through the transition from “construction” to “operations.” “This represents a big shift in thinking,” Araneda says. “During construction, there were thousands of people on-site in constant movement. Now there are a few hundred.”

By comparison, the mill scene is calm and business-like. Calm, however, does not mean that nothing is happening. “We have a new and active challenge now,” Araneda says. “We need to run stably at full load or even slightly above design. Reliability is a key issue.”

Araneda came to his Montes del Plata assignment from Arauco's Valdivia mill in Chile and was responsible for the organization, hiring, and training of key engineers and operators. Montes del Plata did extensive training, since most of the new engineers had not worked in pulp production before. In addition to 40 engineers, about 125 operators were hired. “We split our training into phases, and made





◀ Montes del Plata management team (left to right): Dan Holmsten, Manager of Maintenance & Engineering; Héctor Araneda, Mill Manager; Eero Ristola, Production Manager; and Victor Otárola, Environmental Manager.

good use of the IDEAS dynamic simulator for this training," Araneda explains. "We trained operators to control the virtual mill before the real mill was ready."

Based on progress so far, Araneda is pleased. "I would say we have done well with our selection and training activities," he says. "The mill is running very well and the quality of the pulp is excellent."

**A commitment to Uruguay**

When Montes del Plata built its organization, it made a commitment to hiring and training mostly Uruguayans. Only about 3% of the people in the company come from outside Uruguay. "Most recently, we hired 25 young people from the local high schools and trained them to work at the mill. They relieve some of the operators for a shift so that operators can participate in training to learn multiple skills." ANDRITZ is also hiring and training Uruguayans for its full-service maintenance organization. The maintenance team of 128 is all local people with the exception of one person from Finland. "ANDRITZ has good ex-

perience working in Uruguay," Araneda says, "and it shows in their ability to build a professional organization."

**Selling all that we produce**

Montes del Plata started feeding chips to the digester in June 2014. "We are now regularly reaching our design production and recently have been running above design," Araneda says. "The pulp quality has been superb to the point where we are selling all that we are producing."

Running at and above design has given Araneda a chance to evaluate the overall design of the mill. "I am very happy with this mill," Araneda says. "The overall concept and process flows are extremely sound," he says. "Once we get over the couple of small bottlenecks we have uncovered, I know that we have a good future."

**No looking back**

Certain parts of the construction project were very rough, as schedules and resources between ANDRITZ and Montes del Plata were

pushed. "But that period is over," emphasizes Araneda. "We don't live in the past. We have a very good relationship with ANDRITZ on both the equipment and maintenance sides. We get very good support from the ANDRITZ as we fine-tune each process. We have good discussions that are focused on solving problems."

**Millwide maintenance contract**

Dan Holmsten, Maintenance & Engineering Manager, worked in Sweden for Stora Enso prior to coming to South America. Holmsten has been part of two greenfield projects (first Veracel in Brazil and now Montes del Plata in Uruguay). Holmsten's experiences at Veracel helped to shape the maintenance model being used at Montes del Plata.

"We have agreed upon a millwide contract with ANDRITZ and they are responsible for all maintenance activities in the mill with a fixed maintenance budget," Holmsten says. "We know what we will pay. We have a partner who will share the risks. And, we are willing to pay extra if we get good results."

**TEAMWORK** in the white liquor plant

Carolina Rogberg is Supervisor of the white liquor plant for Montes del Plata. The ANDRITZ equipment in the plant is some of the largest in the world, producing 13,370 m<sup>3</sup> of liquor per day. The lime kiln is designed to deliver 1,100 t/d of returned lime for the process.

Carolina came to Montes del Plata from the steel industry and joined the project in 2007. She supervises a production team of 10 people. "In general, we are operating well and white liquor quality is excellent," she says. "Our one issue is to push production of the kiln. We are coordinating with ANDRITZ to change the burner to a new design in January."

Carolina says that working with ANDRITZ Maintenance Solutions is easy and natural. "They are very knowledgeable and the working relationship is excellent," she says. "I meet with Javier daily and we coordinate our activities."

Javier Cabrera is Maintenance Supervisor for the white liquor plant and the effluent treatment plants. His team consists of six people. "Our main focus is on preventative maintenance and condition monitoring of the equipment. We classify the equipment based on how critical it is to the process, in collaboration with Montes del Plata. The critical equipment (about 20%) gets regular attention.

"I like working with Carolina and her team," Javier says. "We work side by side and are part of the same team. Once a week, we participate in a meeting with all the supervisors in the recovery area just to make sure everyone is informed."



◀ Javier Cabrera, Maintenance Supervisor (left) with Carolina Rogberg, Production Supervisor, in the white liquor plant

**Strategic choice**

From Holmsten's point of view, the choice between insourcing or outsourcing maintenance is a matter of strategic choice by the owners. "If you insource, you need the competence in-house," he says. "If you outsource, you need a partner who has the competence to build an organization, build the maintenance routines, and manage all the activities."

One essential component, Holmsten insists, is that there be an incentive for the maintenance

partner to profit from the mill's excellent performance. "A potential risk is that your maintenance partner will have short-term thinking and just be motivated to make money," he says. To mitigate this risk, the contract with ANDRITZ has a bonus component. "That keeps it from being solely about costs, and drives us all to reaching our performance targets," he says. "Another key advantage is that the budget is agreed to ahead of time. When the cost is known and fixed, you can do the necessary and preventive things which are es-

sential for long-term mill performance."

As Holmsten summarizes it, "The main benefit for us is that we have high equipment availability and we can focus on producing pulp."

**From corrective to preventive**

Mauricio Mattos is ANDRITZ's appointed Site Manager, responsible for the entire maintenance team at the Montes del Plata site. He honed his skills in maintenance management while working at the UPM Fray Bentos mill



*"The pulp quality has been superb to the point where we are selling all that we are producing."*

Héctor Araneda  
Mill Manager



Instrument Technician Luis Vico checks the calibration of a field transmitter in the fiberline. ▶



◀Woodyard Mechanic Emanuel Romero changes out the chipper knives in the woodyard.

ANDRITZ delivered all the process pumps to the Montes del Plata mill. Shown here is ANDRITZ Robert Prugger, a Technician for ANDRITZ HYDRO during commissioning of a fiberline pump. ▼



as part of the team assembled by Andrés Sommer, the Site Manager there and the General Manager for ANDRITZ Maintenance Solutions in Uruguay.

“Maintenance with separate specialist organizations is typically more expensive and there is more difficulty in setting performance targets since there is no single organization with accountability,” Sommer says. “As an alternative, we offered a full-service contract to Fray Bentos, which has been in force since the mill started up in 2007.”

“We had confidence that ANDRITZ would do the planning well and have a good set-up for maintenance based on their experience at Fray Bentos,” Holmsten remarks.

One of the keys, according to Mattos, was that ANDRITZ maintenance engineers joined the project team well before the Montes del Plata mill was built. “We created a long-term maintenance plan, entered maintenance routines and spare parts into an SAP database, and staffed a maintenance organization before chips were ever

fed to the digester,” he says. “We also organized a program for our maintenance people to be actively involved in commissioning. They know the equipment and processes intimately.”

During any start-up and ramp-up, the activities tend more toward corrective actions rather than preventative ones. “This is natural,” Mattos says, “as you have the peaks and valleys during ramp-up. But now we focus more attention on preventative actions to put the mill in steady-state. Less swings, less

disruptions, less emergencies. Plus, we are very actively planning for the next shutdown, which will be our biggest annual opportunity to improve the performance and reliability of the equipment. We will have several hundred people in this mill during a tightly orchestrated time period.”

**Monitoring and coaching**

“My job is to monitor the maintenance performance of ANDRITZ and administer the contract on behalf of the owners,” Holmsten says. “I also play the role of coach to some of

the younger people here, since I have been through this process before. Mauricio has a similar role for ANDRITZ on the other side of the desk.”

“We are here to execute proactive maintenance using our knowledge of equipment and processes,” Mattos says. “One of the most important factors is to have excellent cooperation with the Montes del Plata production team. Dan and I talk daily. All of our maintenance teams meet and talk daily with their production counterparts. There is value

in having us in the mill every day with our access to all the information within the global ANDRITZ organization.”

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**WED to the fiberline**

Daner Perez and Eliana Satrano are production and maintenance supervisors respectively for the fiberline and chemical plant. At the end of each workday, they ride the same bus home and sit side-by-side. Only now, the conversation changes from the calibration of a transmitter on the digester blowline to what to do about dinner and whose turn it is to give 18-month-old Renata a bath. You see, Daner and Eliana are not only work colleagues – they are husband and wife.

Daner is one of the few Montes del Plata engineers who had prior pulping experience. He worked for five years at UPM Fray Bentos, starting as a digester op-

erator and working his way into supervision. “I came to Montes del Plata quite early in the project, so it has been exciting to see the fiberline evolve,” he says. “After the normal hiccups during a start-up and ramp-up, we are running quite well now.”

The main activities for Daner and his team at the moment is focused on optimizing white liquor consumption. On the maintenance side, Eliana and her team are keeping to a strict schedule of preventative maintenance and planning for the next shutdown.

Eliana came to ANDRITZ Maintenance Solutions after working as a lab chief and a recovered fiber mill. “I was a maintenance

planner during the project phase and was recently promoted to a supervisor,” she says. “I love the work, as I love new challenges.”

Any difficulties with being married and working together? “Not really,” Eliana says. “We are not competitive, and we support each other. That’s really an ideal situation for maintenance and production.”

Another positive: “If we get a call in the evening about a fiberline situation that requires maintenance support, I don’t have far to go to get answers,” Daner says. “We can discuss and arrive at an action plan so we’re ready to work the next morning.”

Eliana Satrano, Maintenance Supervisor (left) with Daner Perez, Production Supervisor in the fiberline ▼



Dan Holmsten, Montes del Plata Manager of Maintenance & Engineering (seated) with Mauricio Mattos, Site Manager for ANDRITZ Maintenance Solutions ▶

