In 2005, Suzano began a capital project to add a second pulp line to its Mucuri mill in the State of Bahia in Brazil. Line 1 was started in 1992 with conventional training. Line 2 was started up in 2007, it was the world’s largest single pulp line, with a design capacity of one million tonnes per year.

The project was packaged into eight major EPC deliveries. ANDRITZ was responsible for Suzano. “If you do not pay enough attention to the design of the woodyard, you could have paid a cheaper initial price with a competitor,” Celaya says. “But we did a thorough evaluation. I consider it to be the best in class. “When I was younger,” he explains, “I did a special study on woodyards. Some people consider them to be ugly, expensive, and terrible places, but I don’t. I visited wood­yards in the USA. They put the logs in a channel with water, then take away the bark, and then try to dry the bark to burn in the boiler. It didn’t make sense. Here, we debark the logs in the forest and put the biomass back to the land. We transport 20% less weight to the mill. And then, we have very simple lines.”

Fiberline Executive Manager Fábio da Silva has experience with ANDRITZ woodyards at two mills. “My first experience was at Fibria’s Jacareí mill,” he says. “There we had an older technology chip storage system with screws at the bottom, and I thought it worked pretty well. But at Mucuri we have the open chip storage pile with a stacker and reclaimer. With the reclaimer, it is much, much easier to do maintenance. Yes, you have to do regular maintenance. But, compared to other systems, the performance, the production, the reliability, the capacity are all superior.”

Looking at CapEx + OpEx
“We felt that ANDRITZ’s DD washing technology was technically superior, and we could have paid a cheaper initial price with a competitor,” Celaya says. “But we did a very careful analysis of CapEx and OpEx over 10-15 years and determined that the DD Washers have the lowest overall cost in terms of efficiency and chemical consumption. I must say, we are quite happy with our choice.”

According to da Silva, commissioning and start-up was without complications. “Our big challenge was in obtaining qualified operators,” he says. “The south of Bahia is more known for its beaches than for its pulp production. The IDEAS simulator played a big part in our start-up success. I had previous experience with IDEAS at Jacareí. At Mucuri, we did some improve­ments by having our operators provide input into the building of the computer model.”

“Our customers’ concerns and wishes are the most important,” says da Silva. “So for us everything is about pulp quality. Brightness, dirt content, and physical properties are values we constantly monitor. This is my first experience with DD Washers. I am very impressed with the washing efficiency and the low chemical costs in the fiberline due to the DD Washers.”

Considering work has been done by ANDRITZ Automation Solutions to build the mathematical models on which the Simulator relies. However, for each project effort is required to precisely model a specific mill. “We were very much involved in gathering data and providing our input to build the models for Line 2,” Wuo says.

“The results? In Suzano’s case, there is a good benchmark as to the benefits of the Simulator. Line 1 was started up in 1992 with conventional training. Line 2 used the IDEAS Simulator. “The Line 2 operators achieved a 30% faster learning curve [ramp-up to full production] than did the Line 1 operators,” Wuo says.

And now, Wuo’s interest is in web-based process training from ANDRITZ. “The web tools in combination with the Simulator are perfect for us,” Wuo says. “Our target is to have our own operators start up a line – not the equipment suppliers. Web training and dynamic simulation bring us closer to this target.”
Woodyard
The ANDRITZ woodyard consists of three complete wood-receiving and chipping lines for forest debarked logs, chip storage, chip screening, and bark handling.

- Each chipping line, capacity 280 m³ sub/h, is equipped with a log feeder deck, Euca Roller™ bark separation system with washing, and a horizontally fed HHQ Chipper™.
- Chip storage is an open circular system utilizing the latest blending bed technology with a rotating stacker reclaimer. Storage volume is 94,000 m³ and a high reclaiming capacity up to 1,800 m³/h.
- Chip screening is performed after the chip pile using three CS 1000 gyratory chip screens.

Fiberline
The fiberline is designed to produce high brightness eucalyptus pulp at a rated capacity of 3,160 t/d. Included in the ANDRITZ delivery are:

- Four Drum Displacer® (DD) Washers for brownstock and post oxygen washing.
- Post oxygen pulp screening with two CombiScreen™.
- Four stages of ECF bleaching utilizing DD Washers and the patented A stage process for reducing chemical consumption.