

Suzano's Fluff Pulp Endeavor: **SERIOUS CHALLENGE – GREAT RESULT**

Brazilian pulp giant Suzano is not only the world's largest producer of eucalyptus pulp, it is also a dynamic innovator, intent on taking advantage of the new wave of environmentally sound products that are possible from eucalyptus-based hardwood pulp. ANDRITZ and Suzano teamed up on an ambitious project to convert an existing paper machine to make fluff pulp.

The production of paper products from eucalyptus pulp has come a long way in a relatively short space of time; in fact, just 45 years ago eucalyptus pulp hardly existed. "In that short space of time eucalyptus pulp has become hugely successful in the global market," says Ari Borg, Suzano's Global Fluff Sales and Strategic Projects Director, "with Suzano now being the world's largest producer of eucalyptus pulp."

However, the innovation work doesn't stop, and acting on the saying, "Never put all your eggs in one basket," Suzano has been looking at other ways to enter new markets and develop new products using eucalyptus fiber as a base. Borg adds, "At Suzano, we want to diversify so that we are not dependent on just one line of products."

A SERIOUS CHALLENGE

In 2015, the company began looking long and hard at the growth in hygiene products and the possibility of using eucalyptus to make fluff pulp. After a lot of consultation and internal and external R&D, it was decided that its existing PM5 wood-free coated paper machine, at Suzano's mill in São Paulo, could possibly be converted for the purpose. Suzano also had one more challeng-

ing task; the machine would have to be able to switch back and forth from making fluff pulp to coated paper according to the demand for both products.

After deep consultation with various equipment suppliers, ANDRITZ was chosen to convert PM5 to produce Suzano's own Eucafluff pulp for the hygiene market, as well as switch back to wood-free coated paper as and when needed. Alexandre Lanna, Suzano's Executive Mill Manager says, "We were completely reassured that ANDRITZ had the knowledge and history of supplying large assets for fluff manufacturing and drying, as well as machine conversion experience.

"In addition to this, we knew that ANDRITZ has short-fiber eucalyptus knowledge in its DNA, and we were happy that our challenge was accepted."

ANDRITZ developed the design and engineering for the machine conversion with the use of 3D modeling and testing at its pilot plant in Graz. At the time, there was no data for hardwood in relation to making fluff pulp, so this meant major pioneering work taking place on behalf of both companies.

The conversion of PM5, originally built in the 1960s, included changing the original forming section from double to single screen, modification of the press felt circuit, changing the tip passage, and the installation of a steam box. The machine's condensate extraction system was also changed, as well as the winder was refurbished.

"This really was a serious challenge," says Leonardo de Figueiredo, Senior Commercial & Technical Manager, ANDRITZ. "Not only had fluff pulp never been made from hardwood before, there was also a very tight project schedule of just eight months from contract signing to start-up."

FULL ORDER BOOK

The fully converted PM5 started up in November 2015 and for the last three years the machine has been running at 100% capacity. The Eucafluff brand is now well known in the hygiene market as an innovative and sustainable solution that, when applied to absorbent hygiene products, provides more comfort and well-being to consumers, thanks to the unique characteristics of eucalyptus fluff pulp. Eucafluff can now be found in products around the world like: adult and infant diapers, feminine hygiene products, and airlaid and hospital products.

"This really was a pioneering project on behalf of both Suzano and ANDRITZ, and there were certainly some risks involved," says Guilherme Melo, Suzano's Eucafluff Line Production Manager. "We very much adopted the "learning by doing" concept and a successful path was found thanks to this great partnership."

The entrance into the global fluff market was so successful that the PM5 is no longer converted back to paper manufacturing and now produces fluff pulp 100% of the time.

"We have a full order book and we are constantly completely sold out," concludes Borg. "At Suzano, we are delighted with the way the move into fluff pulp has gone, and along with foreseen 3-4% growth in the market as a whole, the environmental benefits of Eucafluff are also getting a lot of attention due to its low carbon footprint and other environmental benefits.

"We are actively looking at the next steps in the expansion of our Eucafluff journey."

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