



Siempelkamp

Maschinen- und Anlagenbau

New

Cut your cost

Save up to 15% in glue!



ecoresinator

www.siempelkamp.com

Siempelkamp's Ecoresinator:

New MDF blending process provides up to 15% resin savings

October 2011 In the production process of wood-based material panels the costs for the blending process take up a significant part. As part of its cost cutting campaign, Siempelkamp introduced the Ecoresinator powered by Schlick at Ligna 2011. Compared to the traditional MDF blending process, plant operators benefit from up to 15% resin savings.

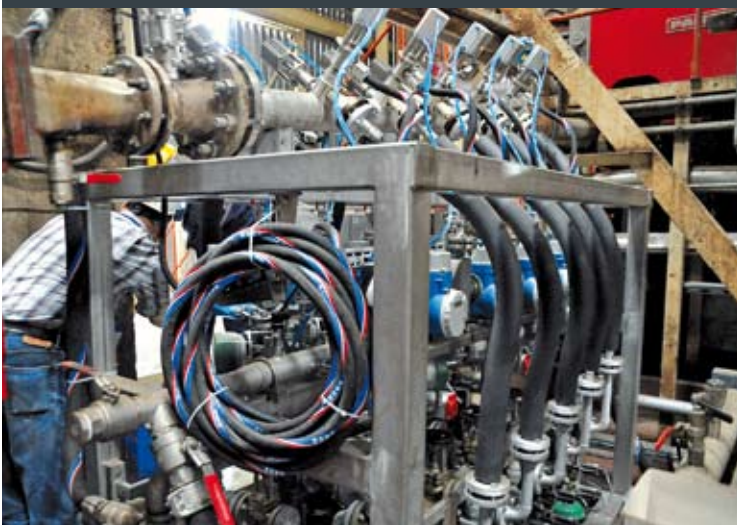
The constant and accurate dosing and mixing of particles and fibers with resin is the precondition in achieving a board with good mechanical properties. With a state-of-the-art blending system, extensive savings can be achieved.

With the new Ecoresinator Siempelkamp introduces a new MDF blending process which will significantly relieve the budget of plant operators. Due to special nozzle technology made by Schlick and the use of superheated steam, customers save up to 15% in resin compared to the traditional blending process in a blowline. Siempelkamp supplies a ready-to-install complete blending system including switchgear cabinet and automation software. Thus, the Krefeld machine and plant engineering specialist combines the advantages of the traditional blowline concept (i.e., very homogenous resin distribution) with low resin consumption!

The Ecoresinator is well suited for subsequent retrofitting of an existing plant and can be installed within a short time.



In unbelieving amazement... 24% of glue savings



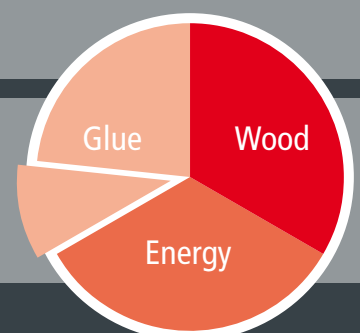
Ecoresinator at Starwood, Turkey

The most effective investment for upgrading MDF lines:

- quick installation
- low operational cost

Your benefit:

- significant reduction of glue
- better surface quality
- capacity gains





Interview with Mr. Hüseyin Yildiz, Starwood

In 2007 you purchased from Siempelkamp a plant for the production of thin MDF equipped with a 7' x 28.8 m ContiRoll®. This plant has been running since mid 2008 – are you satisfied with the performance of the plant?

Our cooperation with Siempelkamp started in the 1960s when we took over a company with a single daylight press from Siempelkamp. Since then we have developed a very close partnership to this machine supplier. This being our 3rd ContiRoll® press at our plants in Inegöl, Turkey, it was no surprise to us that this machine would be running properly and fulfill more than its promised performance.

With speeds of 2000 mm/second, this plant is economical regarding the production of MDF with a thickness ranging from 1.5 to 3 mm. Has this operating speed been steady and safe?

We primarily produce thin MDF with a thickness ranging between 2.5 and 4 mm on the 28.8 m long ContiRoll®. In order to produce such products economically, the system has to run at high speeds. We are aware that we are part of a small circle of plant owners that have been equipped with such a high-speed press by Siempelkamp. According to our knowledge there are no other presses that operate at such high speeds. The system runs steadily and safely at speeds between 1850 and 2000 mm/second. However, just as with a sports car, we are not always running the system to the limit. We have found an optimum speed around 1850 mm/second – this, of course, happens only with a well trained team.

The plant was designed for a nominal capacity of 450 m³ per day at 1.8 and 18 mm. How many cubic meters of board are you achieving with the plant today?

Today we are achieving a capacity approx. 40% higher than the guaranteed performance. This is due to the higher speeds at which we manufacture our products today. Furthermore, we have made a few investments in the entire line including optimizing the fiber separator or installing a 4th diagonal saw, to name only a few.

This plant is a predecessor to today's Generation 8. This means the board thickness tolerances are low which equals little material removal and low resin consumption, correct?

The thickness tolerances of our produced boards are optimal which leads to optimized use of wood and resin. In that respect our MDF plant has already been operating economically. Then, Siempelkamp approached us with a new product, the Ecoresinator, which is guaranteed to save 10 to 15% resin.

You were the first MDF manufacturer to install the Ecoresinator. What was the reason for this decision?

These days, the promise to save resin is like winning the lottery. Our costs for resin and wood are growing but the proceeds from our products cannot be increased indefinitely. After our long cooperation with Siempelkamp,

we have developed trust in this supplier. We have even waited until the Ecoresinator was finished developed before we made the decision for another product.

How complex was the installation and how long was the plant down?

The Ecoresinator was supplied as a completely wired assembly group including a switchgear cabinet. The mechanical and electrical installation including software took one day; the start-up and optimizing phase another day. This means the system was operational after only one cleaning shift.

Were there any start-up problems?

We had no problems. After various parameter adjustments and tests, we could resume normal production without any start-up losses.

How high would you estimate the additional operating expenses for the Ecoresinator?

There are practically no additional operating expenses! We need approx. 75 kg of additional steam per metric ton of fibers – and this is it. We need no vast amounts of circulating air, no additional power, and no additional cleaning shifts. The Ecoresinator was simply attached to our existing blow-line blending system – that is all. The concept has totally convinced us!

How much resin do you save?

The savings in resin depend on the type of wood used, the board thickness and density. Since we are operating a system for the production of thin boards, our savings are especially large and amount at best to 24%.

On average we are able to save almost 15% for all thicknesses (2.7 to 12.0 mm) and densities! We will have to check the conditions during the winter months again but we believe, after three months of operation, that these savings will be consistent.

What is the quality of the boards? Did you have any issues with resin spots?

Even with the old blowline blending system we had no problems with resin spots. Due to the very fine and intensive distribution of resin droplets, we achieve an excellent surface quality. We no longer experience any streaks or dark spots, the surface is simply more homogenous. Furthermore, we were able to increase the capacity by 5% which is attributed to another increase in the production speed and less waste material.

Have other international manufacturers approached you about the Ecoresinator?

At Ligna different manufacturers approached us and inquired about our experiences with the Ecoresinator. One Chinese wood-based panel manufacturer visited our plant to get an impression. The bottom line is that we believe the concept of the Ecoresinator is well thought out: minimal investment, quick installation time and low operational costs contrast with low resin consumption, better surface quality and capacity gains.



Siempelkamp

Maschinen- und Anlagenbau

Innovation is our tradition



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