

Pressing For Added Value, Speed, Flexibility And Independence

In the right conditions, installing a short cycle press for laminating particleboard/MDF with TFM in-house can be a smart move.

By Ricki Normandin

The board industry is a sector where change is largely driven by trends in the furniture industry, which, in turn, are fashion inspired, upscale oriented and in constant evolution. To meet their customers' needs, manufacturers of value added products such as melamine, vinyl and veneer components, need to be highly competitive, flexible and offer significant added value. Most do this quite well or they wouldn't still be in business. But lately, some furniture manufacturers have been taking their production needs into their own hands, for a variety of reasons.

Ken McFadden has been close to the pulse of the industry for several years as Product Manager of Wemhöner presses for U.S. distributor Stiles Machinery Inc. He has seen an ongoing trend in the board side of the business toward providing an ever-wider variety of value added products. An example is the recent addition of a new TFM (thermal fused melamine) line at the Pluswood facility in Oshkosh, Wisconsin, with a high speed 5 x 18 Wemhöner short cycle press as its centerpiece (See Specialty Wood Journal, January/February 2004).

At the same time, McFadden notes, manufacturers of products such as furniture, cabinets and store fixtures, who traditionally buy their melamine from a supply chain of particleboard manufacturers and/or custom laminators, are moving toward greater control of their melamine panel supply through vertical integration.

"Instead of selling just the raw particleboard, manufacturers are taking that extra step to offer more value added products to increase their board sales," says McFadden. "On the other hand, some of their customers are opting for more independence."

McFadden cites as an example the installation of a Wemhöner Short Cycle press line that Stiles Machinery just completed at Premier EuroCase, a manufacturer of store fixtures and flat panel components in Denver Colorado. The new line will allow the company to produce enough melamine to meet their



The Wemhöner membrane press is used to make cabinet doors.

needs internally and sell the extra production to the local Colorado area.

A case for independence

Premier EuroCase had been running only a Black Brothers roll laminator to produce high-pressure laminates in-house but had been buying their melamine supply outside. The new Wemhöner 5 x 12 short cycle press line provides not only control of their melamine supply but much greater flexibility. The line has a production capacity of up to one hundred 5 x 12 boards, or 6,000 sq. ft. per hour, which translates to about 31 million sq. ft. per year. The 5 ft. X 12 ft. capacity gives Premier EuroCase the flexibility to offer a wide range of different widths and lengths. The press is flexible enough to do short, customized runs economically.

The press line took a little over 3 months to install and bring up to production speed. The first laminated board was produced after two and a half months and the remainder of the time was dedicated to operator training

as well as optimizing the line for Premier's production needs.

The right conditions

Adding a press line is a sizeable commitment and may not be a solution for everyone. But in the Premier EuroCase scenario, distance from supply, the need for internal flexibility and a local market of cabinet makers to potentially absorb excess melamine production were some of the conditions that made it a positive move. Another plus was that the company already owned a large building and had the space available to handle the 80 ft. wide and 125 ft. long footprint of the machine.

The distance from supply issue can be a major motivator to consider an installation like this one.

"This type of product is cost-sensitive from the freight standpoint," explains McFadden. "Distribution areas are often small, not more than 500 miles. Their Denver loca-

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Wemhöner veneer throughfeed press.



Wemhöner press provides flexibility for 3D pressing.

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tion put Premier EuroCase in the situation where they had to rely on transportation of their melamine from as far away as Seattle, Washington, or Portland, Oregon, adding cost and increasing lead time."

Having the press line in-house is going to do away with extra freight costs and potential delivery delays, plus provide significantly more production flexibility and access to a wider range of decorative papers at a faster turnaround.

At the raw board end of the industry, the demand for short production runs and customization are issues that are also being addressed with the addition, or upgrade, of a press line.

"Gone are the days of runs of 100,000 sq. ft. and more," says McFadden.

"Enhancements and improvements in papers make it possible to offer customers a huge range of products. Melamine impregnated papers are available in almost any woodgrain pattern and solid color. Short runs of melamine board are becoming the rule not the exception."

Where the paper meets the press

The quality and variety of papers available, due in part to advances in computerized printing technology, is also a motivator for the increased interest among panelboard manufacturers in the U.S. to get into laminate flooring production.

"For HDF/MDF producers, especially if they have a good distribution system; laminate flooring is a logical next step," says McFadden.

Produced in Europe for decades now, laminate flooring is gaining ground in the U.S.

market largely because advances in printing woodgrain patterns make it look so much like the real thing. At the same time, U.S. consumers are letting go of their need for wall-to-wall carpeting.

At the high end of the product range, sophisticated techniques of registered embossing are being used to add low relief texture in relation to the printed pattern so the woodgrain pattern resembles nature even by touch.

Keeping pace with the technology curve, the Heinrich Wemhöner company, based in Herford, Germany, and founded in 1925, has recently embarked on a joint co-operative R&D project with major European paper suppliers and existing Wemhöner customers to develop and standardize aspects of the industry as it evolves. The objective is to strengthen suppliers while providing more value for customers. Wemhöner's contribution focuses on constant improvements and developments in lower pressing times, a requirement driven, to some extent, by the shorter pressing times made possible by the paper impregnators. Now in the final stages of developing a press for one of its customers that runs 240 press cycles per hour, Wemhöner continues to be a pioneer in this area.

Ready for any type of run

In addition to short cycle presses such as the one at Premier EuroCase that uses papers impregnated with melamine resins, Wemhöner also provides membrane presses, for laminating rigid thermofoil onto kitchen cabinet doors for example, and veneer throughfeed presses available in single and multi-opening models for veneer, HPL, or for the production of doors and engineered flooring.

In the rigid thermofoil laminating process, kitchen cabinet door panels are routed, then sprayed with urethane adhesive. Next, the thermofoil is laid onto a tray and cut from a roll before going into the membrane press. In the press, the heat softens the thermofoil, positive air pressure in conjunction with a membrane forms the thermofoil around the doors, providing a smooth and permanent bond by heat reactivation of the glue line under pressure.

Veneer throughfeed presses, in single or multi-opening models, are used to apply veneer for architectural panels, furniture panels, door skins, and engineered flooring. These presses are customized as to requirements for pressure and heat and size and length of the line, depending on the end product.

As the industry evolves, experts like McFadden, who not only represents a leading equipment manufacturer but also keeps his eyes open for trends and changes throughout the sector, provides a valuable liaison service among various industry interests, in the U.S. and abroad.

Stiles Machinery Inc. is reportedly the leading supplier of specialized CNC panel processing equipment. The company also offers the broadest range of added-value services in the woodworking industry including consulting, education, leasing, parts and rebuild, enhancement technology, service and support. Head office is in Grand Rapids Michigan, and regional offices are in High Point and Gastonia North Carolina; Southbury, Connecticut; Irving Texas; and Ontario California.

For further information, visit www.stiles-machinery.com or www.wemhoener.de. ■

Premier EuroCase Adds Wemhöner Press For Panel Production



Andy Wilzoch, owner of Premier EuroCase signs the first board off their new Wemhöner short cycle melamine press.

Stiles Machinery customer Premier EuroCase recently added a new Wemhöner short cycle melamine press to their production capabilities. The Wemhöner press is designed to thermo-fuse melamine to furniture panels. Premier EuroCase primarily purchased the press to supply their own internal store fixture business with melamine board as well as to sell and distribute melamine board to local markets as a value-added service. Premier EuroCase will have the capacity to produce up to 5-foot by 12-foot boards and smaller sizes. Premier EuroCase also purchased edge cleaning and board cooling for the press, making this a very flexible, attractive line for their customers to purchase. Edge cleaning and board cooling allows for easier handling of the boards and to receive conditioned boards by cooling the temperature down in each board prior to stacking. Board cooling allows Premier EuroCase to ship the product immediately instead of allowing 4-5 days for the boards to be cooled in a stack. The Wemhöner Short Cycle Press Line was custom made to fit the Premier EuroCase growth needs.

For additional information, contact Ken McFadden of Stiles Machinery Inc. at 616-698-7500 or visit www.stilesmachinery.com.

Marketplace

Siempelkamp Receives New Orders

China

The company, Guangxi Baise Fenglin Fiberboard Co. Ltd. In Guangxi Province, China has placed an order with Siempelkamp for the construction of a new MDF plant in Baise.

Fenglin already owns a number of MDF plants and has developed over the past few years into one of the most important producers in the South of China.

Siempelkamp Anlagentechnik was selected by this customer because their technical solutions, in particular the high plant speed of 1300 mm/s, at the Dare I and II projects proved convincing. Another decisive argument was the prompt and smooth startup of all Siempelkamp plants delivered to China.

It is not surprising, therefore, that the ContiRoll® press and other core components for the new order are based on the Dare concept. The press has the dimensions 8.5' x 37.1 m and is designed for a top speed of 1300 mm/s. The mat former on the forming line is equipped with the new leveling unit. In China, the quality of MDF boards produced on Siempelkamp plants is regarded as the yardstick.

The resinating units are to be supplied by Siempelkamp's partner IMAL, while the dryer will come from Büttner. The handling system, from the cooling and stacking equipment, through the storage and finishing equipment, to the complete automation of the plant, will come from Siempelkamp. Planning and engineering are to be performed by the experienced professionals from Sicoplan.

The plant is designed to produce not only MDF/HDF thin boards from 2 to 6 mm in thickness but also "standard boards" up to 40 mm thick. An annual capacity of 230,000 m³ (10 mm thick) is planned. Thin boards can only be produced economically at high press speeds, which Siempelkamp is able to provide.

It is also worth noting that for the first time the IFC, a private group of the World Bank, is financing this investment for Fenglin.

The plant is scheduled to come on stream in 2005.

Poland

The Swiss Krono Group has placed an order through its Polish subsidiary Kronoinvest, Zary, for the planning and construction of a complete OSB plant in Poland by Siempelkamp Maschinen- und Anlagenbau.

The new OSB line is to be built on a 45 ha site in the Slubice special economic zone situated on the German-Polish border. As general contractor, Siempelkamp is responsible for the planning, engineering, assembly and commissioning of the plant. The core components are to be supplied by the Siempelkamp Group: PAL will integrate its Quadradyn Screener, a new development capable of the gentle screening of even long strands; Büttner will supply the drying equipment with two drum-type dryers. The forming and press line will come from Krefeld, Germany, equipped with the latest generation of strand orienters designed to guarantee even better orientation of the strands.

As the heart of the plant, the customer has
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