

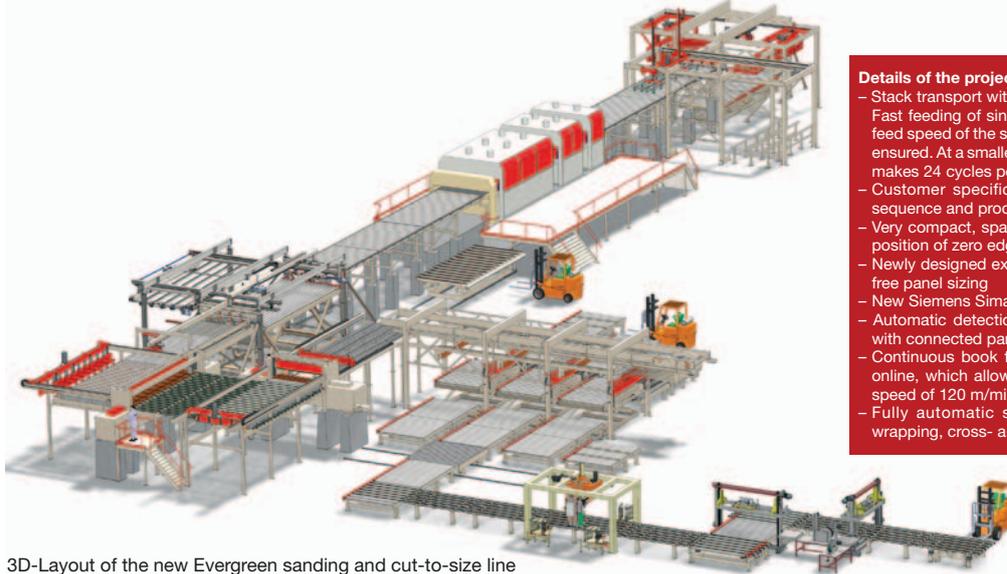
ANTHON GMBH: SUPPLY OF COMPLETE CTS TO EVERGREEN

The name Anthon has become a synonym for solid mechanical engineering. With in-house software solutions, Anthon's high quality products and innovative technology takes into account the demands of its clients. Evergreen is a leading manufacturer of high-quality Medium Density Fibreboard (MDF) and particleboard with an annual output of more than 1.3 million m³. The Malaysian-based company began in 1972 as a timber trade and veneer manufacturer, and has since focused on improving the utilisation of resources and application of advanced technology.

The partnership between Anthon and Evergreen was established beginning with a very demanding task, where large panel stacks had to be delivered to a new Anthon sanding and cut-to-size line. The required processing steps, and in particular,

Fiberboard. "Adapting the definition of the project for the existing constructional specifications and considering the drawn up specification 100% was a 'Masterstroke'. A standard line here would not have been of much use for us."

takes over the rest stacks. So the feeding of the sanding machine is maintained, while at the same time a new stack can run in and be positioned correspondingly. This newly designed intermediate buffer device makes sanding loss by a stack change a matter of



3D-Layout of the new Evergreen sanding and cut-to-size line

Details of the project:

- Stack transport with stack weight up to 25,000 kg. Fast feeding of single panels, so that the required feed speed of the sanding machine of 120 m/min is ensured. At a smallest panel length of 5,000 mm this makes 24 cycles per minute.
- Customer specific design concerning function, sequence and product variety.
- Very compact, space saving design with optimum position of zero edges for high saw capacity
- Newly designed extraction system for nearly dust-free panel sizing
- New Siemens Simatic S7-1516 control
- Automatic detection of different surface qualities with connected panel sorting system
- Continuous book forming for the saw connected online, which allows maintaining the sanding belt speed of 120 m/min.
- Fully automatic strapping line with stack-foil wrapping, cross- and longitudinal strapping.

the limited space increased the complexity of this task.

"The excellent implementation of our ideas into the concept of the line was a decisive factor

for placing the order with Anthon," said Kuo Jen Chiu, Executive Director of Evergreen Panel Sizing Technology

The resulting solution is as follows: The raw panels to be cut to size come from a stack storage to the feeding system of the sanding machine. The feeding system is designed such that a continuous sanding of 120 m/min is maintained. It is equipped with an intermediate buffer system, which

the past. Arriving panel stacks can be with or without base and coverboard. The disposal is taken over by a separate vacuum de-stacking system, which removes base and coverboards from the line and de-stacks them accurately.

Following up to the sanding

PANEL MANUFACTURING

machine, there is a surface inspection station. It allows the automatic identification of B-panels. They will not be fed to the saw, but will be removed from the production process over the separate drop-box de-stacking system. The B-panels can be removed with a forklift truck or be fed into the line again later for a cut-to-size process. The station for the book forming is integrated online. It allows book forming for the book saw without reducing the sanding speed. The saw itself is designed as a book saw with a cut height of 180 mm. The rip cut saw has a cut length of 6.500 mm; the crosscut saw, 2.700 mm. Behind the cut-to-size there is a fork de-stacking station. It is equipped with three de-stacking places, in order to make the corresponding sorting

of the cut-to-size images.

Each place is equipped with an automatic base and coverboard handling system, so that these can be supplied according to the de-stacking instructions. Next, the stacks can be removed by a forklift truck or be supplied to the automatic strapping line. It allows foil wrapping and also cross and longitudinal strapping. The automatic packing line implements all known packing instructions.

The control of the line is by means of a Siemens Simatic S7-1516. With it, all in- and outputs of the line, like sensors, valves, and drives are linked. The obvious advantages are performance, storage size and data safety function. The HMI is realised with a Comfort panel. It allows the

operator to influence and control all parameters of the line, as well as move each individual drive manually. The control can be maintained over remote VPN access, such that Anthon's service engineers have comprehensive access to the control and are able to analyse the causes of faults quickly and at best remedy them.

"We have delivered the line to Evergreen after a complete commissioning in Flensburg. After the installation and start-up phase, it will be fully operational at Evergreen beginning summer 2015. Anthon will be listening to customers' needs, in order to deliver lines developed with them in 2015, the year of our 150th Anniversary," sums up Sales Manager Bernd Jochims. **PFA**

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