

As seen in December 2013

# PALLET ENTERPRISE

One of the Top Production Lines on Earth

## German Pallet Company Eyes Growth of Its WORLD Pallet Standard

By Chaille Brindley



**Unbelievable Production:** *The Falkenhahn AG nailing line is capable of producing more than 8,000 pallets per shift on one line with only two operators and a forklift driver.*

Marcus Falkenhahn wants to radically impact the global pallet market. And he thinks his WORLD pallet standard can be the key to serving major accounts that want consistent quality and interchangeability across the globe. Oh, and he wants you to join his WORLD pallet revolution.

You might think Falkenhahn's grand vision is a bit farfetched until you visit his plant located in Geisa, Germany, which is situated exactly in the middle of Europe. It is truly remarkable. Falkenhahn AG, a pallet manufacturing company owned by Marcus' family, is

the only place on the planet currently producing WORLD-branded pallets. But this one location is able to produce millions of pallets per year. Falkenhahn would like to attract key partners around the globe to build WORLD-branded pallets in key markets, such as North America and Asia.

### **The Perfect Plant Design**

What makes the Falkenhahn AG plant so amazing is that it can produce more than 8,000 pallets per shift on one automated nailing line using only two operators and a forklift driver. I stood at the

end of the line for five minutes and watched it pump out Europallets at the rate of one every 2.5 seconds. Having visited plants all over the world, it is truly the most remarkable production I have ever seen from one machine with so few people.

Let's be clear, Falkenhahn AG can achieve this remarkable production rate because it only produces one size and style of pallet. It only manufactures 800x1200mm Europallets branded with the WORLD trademark. The entire line has been optimized to eliminate waste and limit manual activity that requires





**Partner Up:** Falkenhahn AG is the exclusive producer of WORLD Pallets in Europe and is seeking production partners in the USA.



**HT Pallets:** Finished pallets are heat treated using Cathild dry kilns.

human interaction.

Marcus Falkenhahn, chief executive officer of Falkenhahn AG and the developer of the WORLD brand, said, “Our plant has been designed from the ground up to produce high volumes of quality pallets with minimal human interaction, which allows us to be very cost competitive.”

Every aspect is planned to reduce the number of manual touches that must be done as well as to allow for efficient production even if part of the line has to be stopped for a brief period of time. The line starts with the destacking of blocks or the production of blocks. Depending on the customer requirements, availability and market pricing, Falkenhahn AG can use pre-made blocks or produce its own from softwood lumber.

Blocks are automatically destacked using automated grabbers that move one row of blocks at a time onto the stacking line. Once a full pallet load of blocks is destacked, the empty pallet moves down the line to an automated stacker. Except for the forklift driver putting loads of blocks on a conveyor system that feeds the destacking machines, no human interaction is required for this part of the line.

Blocks move down the line and are separated into three rows where they are set the exact spacing required to produce the runners for a 800x1200mm block pallet.

At the same time, loads of pre-cut boards are loaded onto conveyors that feed into tipper that tip the stacks over



into board destackers. Various sized boards are destacked and then fed into the line one at a time. There are two major board sizes at this point in the line, and they are run through edgers to ensure consistent sizing.

Boards are grabbed by the automated line and put into place over the top of the blocks. In one motion, all of the runner nail joints are nailed at once.

Falkenhahn said, “We took a Gunn-Vanderloo nailing machine and completely retrofitted it using automated destackers, conveyors, and other automation technology. The two men who run the machine helped design it. They take a lot of pride in their work.”

The Falkenhahn AG line uses three different sizes of bulk nails.

The runners are then turned over and continue down the line. Some of the runners are stored in stackers that allow for the front end of the machine to continue if a jam occurs. Also, this emergency supply can feed the back end of the machine if the front side stops for some reason.

Falkenhahn said, “The machine is designed to keep one side operating even if the other stops. This ensures efficiency and constant operation.”

Another way the line reduces waste is that the forklift driver does double loading for every task. So when

blocks are loaded, two stacks of blocks are loaded at once. The same thing goes for boards. The forklift driver utilizes a forklift with two sets of tines that can be easily changed to accommodate various sizes of material.

Falkenhahn added, “We work to eliminate duplicate motion whenever possible.”

A set of three runners properly spaced moves down the line to the second assembly and nailing station. Boards are de-stacked, edged and moved into place similar to how the first station works. Boards are arranged over the runners to form the top deck. Each top deck assembly is nailed in one motion at the second nailing station. The line breaks into two sections at this point. This allows the process to continue even if half of the end of the line stops for some reason.

Finished pallets are branded on all eight blocks at once. The corners are cut all at once. The next station chamfers both sides at once. And the last section is a quality control station that uses an automatic eye and dimension controls to identify any problems with the pallets, such as protruding

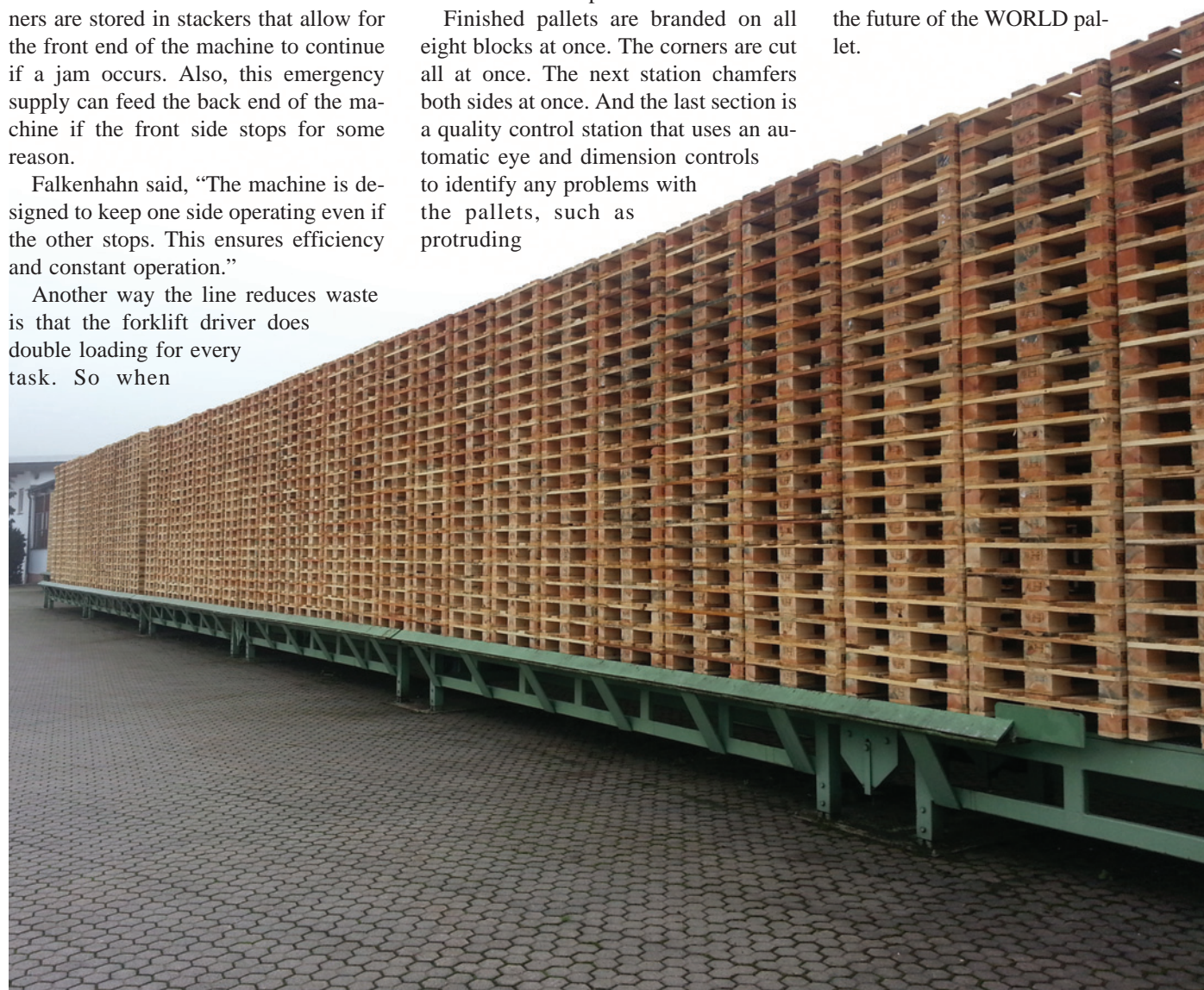
nails or inaccurate dimensions. Those pallets are kicked out to be fixed.

Pallets are then stacked at the end and fed into automatic conveyors that circle around the outside of the building. Falkenhahn said, “We have lots of conveyor space to allow the production volume to stack up so that one forklift driver can handle all aspects of the process.”

Finished pallets are heat treated using Cathild dry kilns that are heated with natural gas. Falkenhahn AG has 14 Cathild dry kilns, and every chamber has its own burner and tank. Sensors help ensure the quality of the drying process.

Wood waste is ground up and sold off.

If you could only see the level of precision, you would be impressed, too. This is one reason why you can't dismiss the vision that Falkenhahn has for the future of the WORLD pallet.



**Handling Efficiency:** Long stretches of conveyors outside of the Falkenhahn AG plant are capable of storing stacks of pallets because one forklift operator does it all.



## Why the WORLD Pallet?

Falkenhahn started the WORLD Pallet in 2008 due to a dispute with the European Pallet Association (EPAL) over license fees involved in its Europallet standard.

The WORLD Pallet began when Falkenhahn AG decided to stop working to produce EPAL pallets due to concerns about the royalty fee. Since Falkenhahn AG produced about 35% of the German market at the time, Falkenhahn asked, "Why should we continue to work for EPAL?" He launched the WORLD Pallet program in 2008 and is the exclusive licensee in Europe.

But now, Falkenhahn hopes to build up a North American pool of WORLD-branded pallets. He said, "European customers that have used the WORLD Pallet have expressed interest in using this trusted brand in the United States." And he is looking for large, quality conscious pallet manufacturers in the United States that could become exclusive partners for specific regions or territories.

Unlike when EPAL sought to enter the U.S. market, the proposed WORLD pallet for North America doesn't have to mirror the dimensions or style of the Europallet. Falkenhahn explained, "Our customers are looking for a quality program and a recognized brand that can be interchanged between Europe and North America. Shipments bound for Europe would be placed on a WORLD 800x1200mm pallet while those going to North America would be loaded onto a 48x40 inch WORLD Pallet."

The WORLD standard is intended to be a guideline to build the pallets as well as a quality guarantee, but it has nothing to do with the sizes or dimensions of the pallet.

Falkenhahn said, "We would create a whole new WORLD standard for the U.S. market. It can be produced to work with local standards and materials that would not be difficult to obtain." This is a very different approach than EPAL used, which insisted its standard be copied to the fullest detail, Falkenhahn pointed out. For example, the WORLD Pallet would not impose metric measurements, or specific nail or lumber requirements that are almost impossible for U.S. producers to procure.

Falkenhahn said, "I am not looking to collect big franchise fees or impose




**Double Duty:** Every single point requiring a forklift moves two stacks at once. This reduces the number of trips and eliminates the need of a second driver.

tough inspection criteria; I want to build the WORLD brand." He stated that by working with automated, quality producers, much of the quality concerns can be mitigated without overly intrusive inspections.

Quality hasn't been a problem for the development of the European WORLD Pallet pool because all of the supply has been produced by Falkenhahn AG. While partners in the United States would not have to be as advanced as the Falkenhahn facility, the organization behind the WORLD Pallet is looking for quality producers with automated nailing capacity to join its initial network in the United States.

Recently, the WORLD Pallet added RFID capacity to its offerings, although Falkenhahn was quick to point out that most customers are not willing to pay for it at this time.

U.S. companies that want to use the WORLD logo would need to be licensed by WORLD Pallet AG.

Falkenhahn said, "U.S. companies interested in the WORLD Pallet are welcome to contact me and visit my facility in Germany to see what we are all about." 

For more information on the WORLD Pallet, visit [www.world-pallet.com](http://www.world-pallet.com) or email [info@world-pallet.com](mailto:info@world-pallet.com).