

Wuxi Putian – Power transformer core production excellence to be achieved through Pesmel Material Flow How

Pesmel's automated high bay storage solutions offer flexibility and growth potential for Wuxi Putian.

Established in 2004 and with annual sales of over 800 million yuan, Wuxi Putian has been building an international reputation as China's largest producer of high quality power transformer core products for clients that include ABB, Siemens and Schneider and etc. Wuxi Putian approached Pesmel in autumn 2014 to design and deliver modern logistic system for its production facility located in Xibei Town, Wuxi, aiming to increase mill productivity by the beginning of 2018. The end result – an automated material flow management system that allows for future expansion across multiple phases.

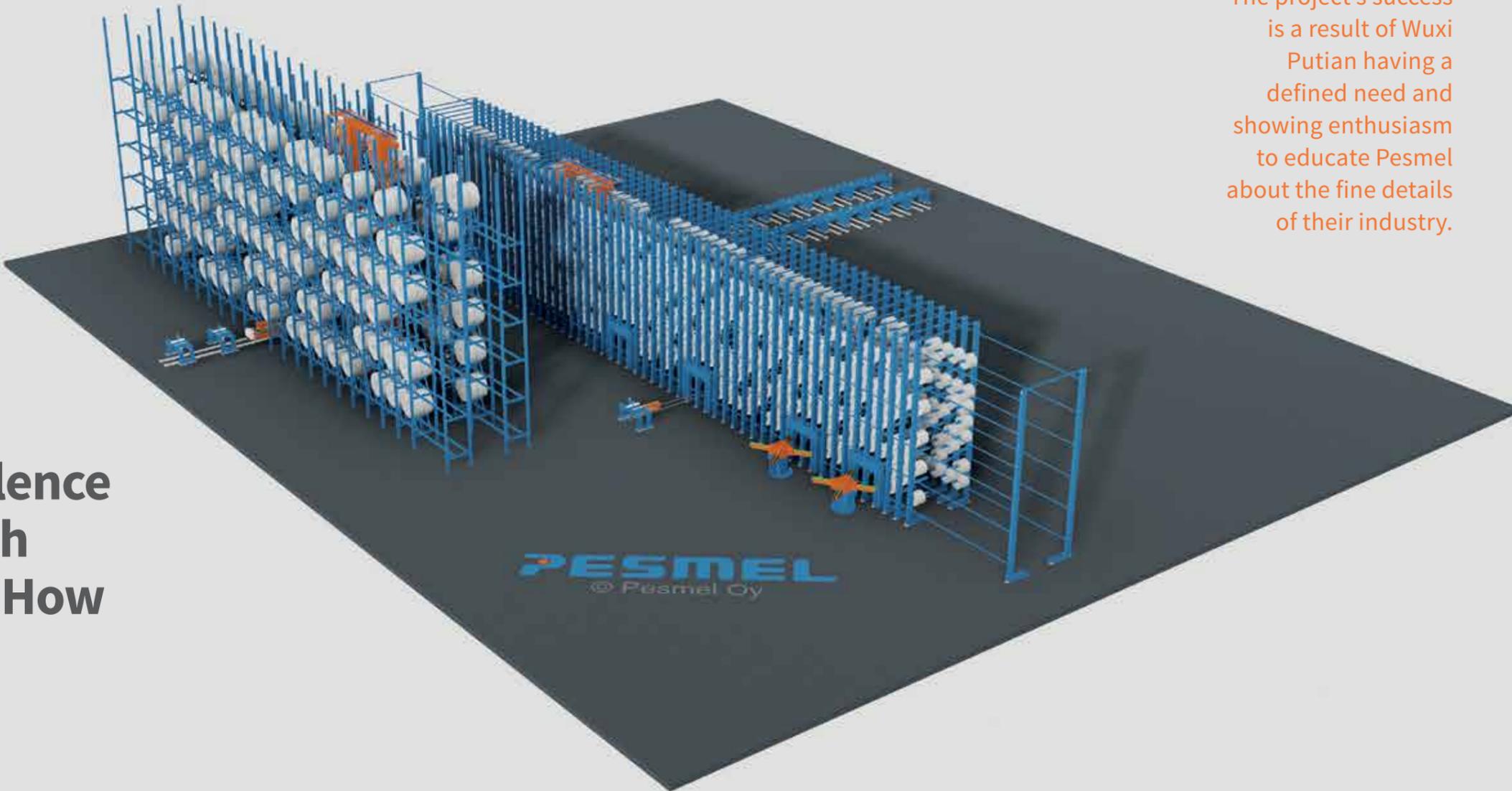
A defined need

As an innovative, young company with ambitions to expand its power transformer core business, Wuxi Putian needed a material flow solution that would allow for high quality, highly efficient coil management and storage and the possibility for seamless integration with future on-site expansion

projects. Due to the fine tolerances involved in producing power transformer cores, Wuxi Putian required a solution that maintained – and even elevated – the quality of its final products whilst coping with constantly changing market demands.

A flexible solution with scope for further expansion

As planning progressed, it became apparent that raw material storage before the slitting lines and Cut To Length (CTL) lines would allow for material buffering and less frequent production breaks. In the new system, coils are unloaded in the truck unloading area, identified and placed onto a coil stand, from where they are moved via newly installed, Warehouse Management System (WMS) controlled coil carriage and stacker crane to Raw Material Storage. The coils then move to the slitters, where they are cut to a range of smaller widths. If needed, the coils can then be returned to the first warehouse for re-slitting to even smaller gauges.



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The strips are then sent for buffering and sorting to, Slit Coil Storage warehouse. This storage warehouse is crucial to the efficiency of the mill, as coils of many widths, thicknesses and materials need to be correctly sorted and distributed in the correct order for further processing. From the Slit Coil Warehouse, the coils can either be sent to the CTL lines or to packing areas, or alternatively they can be sent for processing in existing facility with a carriage.

The high efficiency, error-free material distribution offered by Pesmel's solution allows for all materials to be tracked throughout the system and clearly displayed on WMS terminal. The real-time inventory significantly supports production planning, a critical area in terms of cost savings.

A connected mill, a streamlined process

By moving away from individual processes to a connected, streamlined mill, Wuxi Putian has lowered operational costs by reducing the amount of people needed to transfer coils

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between processes, increasing the effectiveness and efficiency whilst also benefitting from the reliability a WMS brings. Real time storage inventory has also given Wuxi Putian the ability to plan purchasing and production according to upcoming orders. Human error in sorting and distribution has been eliminated, and handling with automated equipment ensures that products are not damaged by excessive handling. Less need for manual lifting and coil movements has also meant that operational safety has significantly increased.

The project's success is a result of Wuxi Putian having a defined need and showing enthusiasm to educate Pesmel about the fine details of their industry. As a result, Pesmel utilised its innovative approach to problem solving to deliver a bespoke solution that incorporates many feature and technologies unique to this mill. In return, Wuxi Putian can maintain its hard-won reputation as a quality manufacturer of power transformer cores as it grows into the future. •



Chairman Cai on how Pesimal helped Wuxi Putian future-proof their operations in today's volatile market.

Wuxi Putian and Pesimal – A Chairman's-eye view

What are the long term prospects of Wuxi Putian?

Wuxi Putian primarily focuses on iron core manufacturing for electricity transformers. With our current company-scale competitive advantages, including our technologies, equipment, R&D, product quality, market position, employees and management, Putian is continuously strengthening its position at the top of the Chinese market. Putian's overall target is to be the leading transformer manufacturer in the world.

What kind of challenges did you face at the start of this project?

How to dovetail equipment purchases with our product processes whilst achieving an optimal balance of investment and performance.

What factors did you consider when choosing Pesimal?

We considered the advanced nature of the technology employed by the Pesimal system, as well as its stability, adaptability and redundant capacity for future expansion. Pesimal's system met all criteria.

Wuxi Putian and Pesimal have developed new ideas and technologies over the last two years in a drive to create a modern storage system concept. How do you see the fact that this delivery is the first of its kind in the world? Does being a pioneer bring any uncertainties with it?

Someone always needs to be the first to test new ideas, and often this role is taken by field-leading leading companies. Yes, there is always uncertainty and risk in any renewal project, which we fully understand. But we believe that we can always lower the risk of uncertainty by continuously improving our working practices. •

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