



WKPT Precision News

World Known, Well Known

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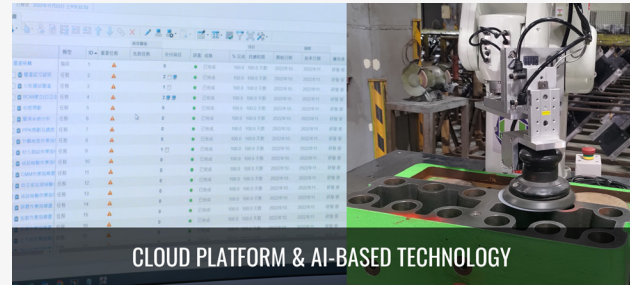
WKPT Update

WKPT Upgrades With AI Analysis And Cloud Platform

WKPT recently revealed the project results of the Ministry of Economic Affairs' "Digital Transformation of Metal Products and Supply Chain Upgrading Plan", promoting high-value products and transformation of business models through new technologies such as artificial intelligence, big data, and cloud platforms.

Based on AI visual inspection technology, WKPT built an intelligent automated grinding system combined with robotic arms, and applied it to the surface grinding of offshore wind turbine brakes. The grinding coverage achieved over 95% successfully. This project realizes the product application of traditional manufacturing industry crosses green energy industry, and enhances the added value of metalworking industry. In addition, being aware of the importance of data sharing and collaboration in the company, WKPT imported a cloud-based platform for PLM and information flow. All project members from various departments have been benefited with a better

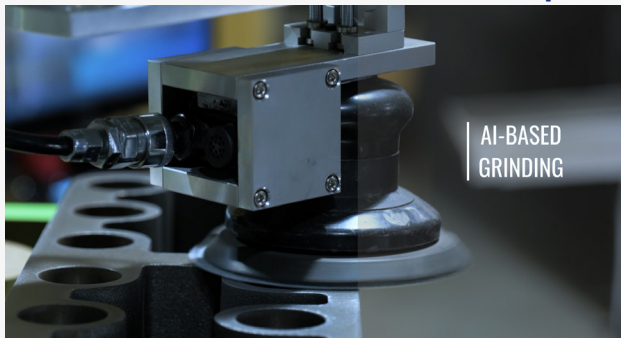
communication and work efficiency. WKPT uses AI and cloud operations to promote high-value products and business model transformation, and improve the competitiveness internationally.



WKPT uses AI and PLM to assist transformation and upgrade in the "Digital Transformation of Metal Products and Supply Chain Upgrading Plan."

Information Express

What can AI Visual Inspection Do for Precision Machining?



AI brings significant efficiency gains to the metalworking industry

At present, AI technology is being widely used in various industries, including the metalworking industry. AI technology

can be seen in the fields such as optimization of machining parameters, detection and classification, predictive maintenance, and smart manufacturing.

For example, in the case of machining optimization and visual inspection, WKPT has built a grinding robot system that combined an automated robotic arm and AI visual inspection to simulate the optimal grinding path. Through 3D visual positioning, the system collected a database of thousands of different parameters such as light, angle, and shape for reference in future. When applied to the grinding and polishing process of offshore wind turbine brake systems, it had a success rate up to 95%, which improved efficiency by nearly 70% comparing to manual. With the assistance of AI, WKPT has successfully reduced time and labor costs, refined grinding quality, and powered in technological support to the clients in green energy industries.

Industry News

Utilizing PLM to Accelerate Energy Transformation

"PLM is playing a key role in accelerating the transition to green energy and a decarbonized, sustainable, and circular economy that will benefit our businesses, our customers, and the future of our planet for generations to come." (Accelerating the Transition to Green Energy with Product Lifecycle Management)

The global demand for green energy transformation is rapidly increasing, making companies to take proactive actions. An article in a well-known magazine <POWER> suggested that Product Lifecycle Management (PLM) is considered a key tool to accelerate green energy transformation. PLM can manage the entire product lifecycle, including design, production, maintenance, and disposal, allowing companies to optimize product design, reduce waste, and create environmentally sustainable products more efficiently.

WKPT has also introduced PLM into our project of offshore wind turbine brake system. The entire process, from feasibility study, process design, prototyping and testing, to mass production, has all been implemented on PLM platform. By integrating project data from different departments through PLM, WKPT has eliminated data silos and improved cross-department

communication and collaboration. The project leader, R&D, has also been benefited through data integration, reducing unnecessary waste in design process and improving its quality. In the trend of carbon reduction and green energy transformation,



The implementation of product life cycle management is beneficial to carbon reduction and circular economy

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