



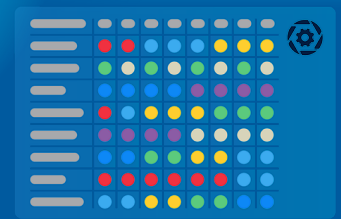
Sight Machine Powers Digital Transformation of the World's Largest Magnet Wire Manufacturer

INDUSTRY: MANUFACTURING
VERTICAL: PROCESS MANUFACTURING
INDUSTRY PRIORITY SCENARIO: BUILD MORE AGILE FACTORIES

To improve manufacturing throughput without sacrificing quality, Essex Furukawa partnered with Sight Machine to unlock its plant data. By using Sight Machine on Azure as its manufacturing productivity platform, Essex Furukawa is able to track overall equipment effectiveness (OEE) across all plants, quickly resolve production problems, and continuously improve production speed, quality, and availability in order to meet growing demands from the electric vehicle (EV) market.

Meeting Growing Demands

Essex Furukawa is the world's largest manufacturer of magnet wire/winding wire, which powers motors, including the motors that power electric vehicles. Due to the ever-increasing demand for EV, global automakers began rapidly shifting their production to focus on electric power. Essex Furukawa faced significantly increased demand—while needing to address supply-chain challenges simultaneously. To maintain its position as market leader, Essex Furukawa leadership sought to digitally transform its manufacturing plants to increase throughput and uptime while delivering the high-quality products for which they are known.



Results

Greatly increased throughput without loss in quality or availability

Developed solutions to improve quality

Sight Machine is being **scaled** to Essex Furukawa plants worldwide

Improving Throughput Without Sacrificing Quality

Essex Furukawa's growth depended on the ability to increase production without affecting quality. The magnet wire Essex Furukawa makes for EV motors must meet exacting standards enabling it to withstand years of severe stress, including high heat, high electrical current, and fast switching frequencies.



"Sight Machine is changing the way our people make decisions," says Tim Shiigi "Rather than making decisions based on gut instinct, they're making more informed decisions based on data and insights from using the Sight Machine platform."

Tim Shiigi, Senior Vice President, Global Operations, Essex Furukawa

Essex Furukawa leadership knew that by connecting their manufacturing plants using an IT/OT approach, they could collect and analyze production data to predict, diagnose, and resolve production issues faster. They sought a real-time view of production and the ability to apply advanced analytics for predictive maintenance and continuous operational optimization.

Deploying Sight Machine on Azure

After evaluating competing solutions, Essex Furukawa chose Microsoft partner Sight Machine to begin the digital transformation of their manufacturing plant in Torreon, Mexico. Essex Furukawa chose Sight Machine due to its unique ability to able to turn all production data into a common data foundation for manufacturing operations and analysis.

Through over a decade of refinement, Sight Machine has built a data foundation that models discrete, batch, and continuous production styles into four common data models: Cycle, Part, Downtime and Defect. By doing so, Sight Machine delivers rapid time to value, and scalability across the enterprise.

Essex Furukawa uses Microsoft Azure as its secure, intelligent, and scalable cloud platform, helping organizations achieve transformation goals at digital speed. Using advanced AI and machine learning technologies in Azure, Sight Machine can analyze diverse and high-volume data to deliver real-time streaming, analysis, and enhanced insights.

Sight Machine on Microsoft Azure provides Essex Furukawa with a single, trusted, and dynamically updated view of production, which allowed them to adopt a unified method to track Overall Equipment Effectiveness (OEE) across all plants and to greatly improve throughput with no impact on availability or quality. "We can see things we never saw before remotely and in real-time, and this data foundation has given us new capabilities as an organization," says Tim Shiigi, Senior Vice President, Global Operations, Essex Furukawa

Sight Machine also developed analytics models focused on improving quality. The system recommends ways to improve quality and validates the magnitude of improvements to ensure worthwhile results. The model is continuously retrained using real-time streaming data for optimal effectiveness. The recommendations have resulted in significant efficiency improvements. After successful deployment in their Mexico manufacturing plant, Essex Furukawa chose Sight Machine as the manufacturing productivity platform for its plants in the United States, China, Germany, Serbia, Canada, and Malaysia.

"Sight Machine is changing the way our people make decisions," says Shiigi "Rather than making decisions based on gut instinct, they're making more informed decisions based on data and insights from using the Sight Machine platform. It also enables rapid experimentation, meaning that we can tweak something on the line and measure the impact very quickly."



About Sight Machine

Sight Machine helps manufacturers improve profitability, productivity, and sustainability by streaming and analyzing production data from across the enterprise. With a common data foundation for operations and analysis, manufacturers can unlock data to make better, faster decisions to improve production performance.