Advanced technologies

TIAMA ECO-system maximizes glass production and efficiency

For hot- and cold-end machines, TIAMA's ECO-system revolutionizes glass manufacturing with real-time monitoring and data synchronization. It enhances communication, efficiency and quality - all while bringing the company's YOUniverse concept abreast of the smart factory and in full alignment with Industry 4.0.

Victor Bidegain
Product Owner Data
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Tiama ECO-system offers many features about production monitoring, quality, maintenance, reporting and support in order to improve the global productivity and usage of Tiama machines.

One of the key features of Tiama solution is its ability to provide real-time production monitoring. It gives access to all Tiama machines by remote control and offers important information about the productivity of each machine. All data is available on a single webpage accessible on the plant network. The system provides productivity and predictive maintenance KPIs for monitoring Tiama machines, optimizing their global maintenance, and ultimately improving their efficiency.

DRIVING EFFICIENCY

Tiama ECO-system offers many features to improve the quality of production. By collecting images of rejected containers and managing sample challenge reports, it gives an overview of current production rejects to the quality team. With this real time collection, inspection machine operators or quality teams can follow rejected a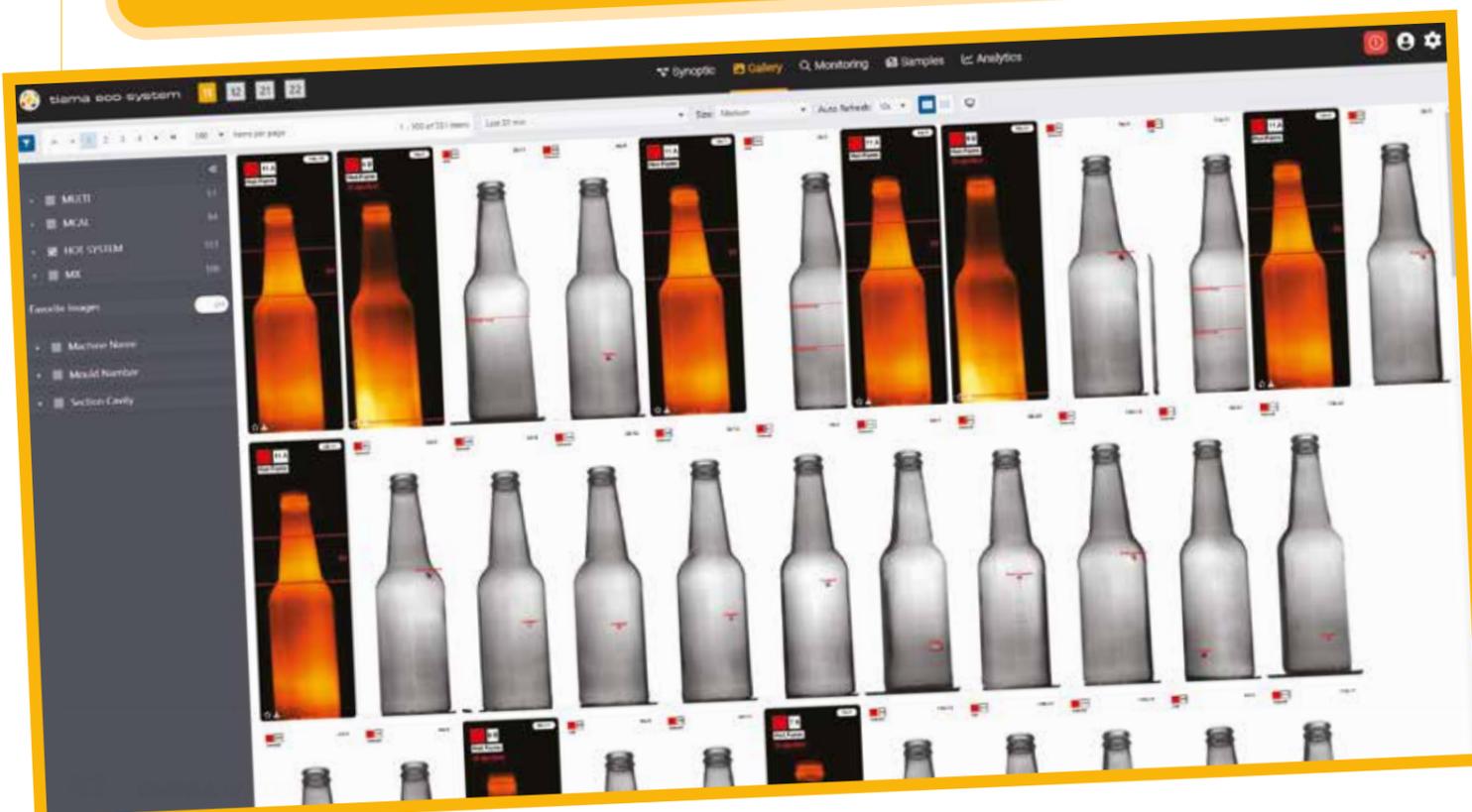rticles and identify faster the critical defects when it appears on production. One of the latest features, called 'supervised samples,' allows operators to manage physical samples with automatic control and compare the results with an expected list of defects defined by the quality team. With this feature, they know exactly when the sample challenge was made, whether samples were rejected or not for a specific defect, and no need to enter results into another system or paper book; results go directly and automatically from inspection machines to Tiama ECO-system, and then to customer MES.

TRACEABLE DATA

All critical data such as rejected images, samples reports or machine events, are saved into the Tiama ECO-system database. In case of a customer claim, glass makers can search into the Tiama ECO-system database for some information about this claim. With

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this data Tiama customers can prove to their customer that all requirements were met or find the events which caused the claim and take internal corrective actions.

With its specific IT architecture, Tiama ECO-system simplifies the support from Tiama Hotline to inspection machines. Indeed, a secured connection is established between Tiama ECO-system and Tiama headquarters with the aim of ensuring an access to the machines for Tiama support and to keep the traceability of requests for assistance and historical connections to the machines. For operators a program called "TiamaHelp" is available on the Tiama ECO-system solution and directly on inspection machines to operate a request for assistance in their own language.

DATA SYNCHING

One of the advantages of Tiama ECO-system is its ability to synchronize Hot End and Cold End data such as counters, measurements, reject images, and display them with Section/Cavity and Mould Number information. With all range 4 Tiama machines connectable to the Tiama ECO-system, it offers the possibility to perform some correlations between Hot End and Cold End machines. Hot End operators can access Cold End data and vice versa. This synchronization of data is crucial for glass manufacturing as it allows for better communication and collaboration between the two sides. By accessing data from both sides, operators can make better decisions and optimize the production process to improve efficiency and quality.

In addition to data synchronization, Tiama ECO-system can also warn users on major production events such as measurement drifts, critical defects, sample reports failed, or high rejec-

tion rates. Users are informed by Tiama ECO-System notifications and email communication about significant events in the production. All alerts are configurable by users, machine targets, and triggers.

This feature is particularly useful as it allows operators to address issues quickly and react immediately by taking corrective actions before they become major problems, which improves the quality of the final product and reduces waste.

CONNECTING THE DOTS

Overall, Tiama ECO-system is a powerful tool for glass manufacturing. By synchronizing data between Hot End and Cold End machines and providing real-time alerts, the system enhances communication and efficiency in the production process. With its ability to monitor and optimize production, the Tiama ECO-system solution is an essential tool for glass manufacturers looking to improve their efficiency and their quality. And this data system is a major part of Tiama YOUniverse concept.

The goal of this concept is to link all Tiama solutions to gain and improve the efficiency of each solution and in the end to improve the whole plant efficiency. It is not only Hot End and Cold End inspection machines and Data solutions, it is also about linking Laboratory devices, engraving solutions and more…

From Hot End to Cold End inspection machines, by going through Datamatrix engraving machines, Datamatrix readers or Laboratory machines, YOUniverse links all Tiama's data to offer to customers a full database of information already formatted in order to improve the global productivity of plants.

YOUniverse is Tiama's smart factory and industry 4.0 concept, and the Tiama ECO-system solution is the central point of this concept as it is the data source for the Tiama world and more. Another Data solution called Tiama DataMine is IIoT platform suite which collects data from the Tiama ECO-System solution but also on all other machines data available. Tiama DataMine A.I. technologies continuously collect data, no matter the format, and structure them in a single, secure database, providing the production teams with optimal equipment control parameters.

Tiama ECO-system and other Tiama data solutions are becoming increasingly important in glass factories as they provide a way to improve efficiency, quality, and transparency. By investing in advanced technologies and implementing a comprehensive data management system, glass plants can optimize their processes and stay ahead of the competition. ■

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