Press release

Hameln, Germany, October XX, 2021

Transparency in OEE

Lenze showcases digital twin use cases, as well as software and hardware for end-to-end digital engineering in Nuremberg

New business models: resilient, resource-efficient manufacturing: and less downtime thanks to the transparency of relevant data – these challenges facing mechanical engineers and their customers are increasing. At SPS 2021 in Nuremberg (November 23–25), Lenze will be showcasing digital solutions as well as software and hardware for today's tasks in Hall 7. The focus is on digitalization and accelerating production, service, and development processes.

Many mechanical engineers are praised for digitalizing their products and processes, but too often there is a lack of concrete scenarios that also prove profitable for the engineers. Moreover, service providers lack domain knowledge, and there is a lack of overview of assets in production. That's where Lenze comes in. The automation specialists from Hameln focus on use cases that quickly provide mechanical engineers and operators with concrete added value. Two applications stand out.

Access to asset information

Manufacturing companies are interested in minimizing maintenance and repair costs through efficient planning. For that to succeed, users need transparency as to which assets are actually installed. Lenze wants to simplify the management of all installed assets so that it is possible to retrieve all information if a machine malfunctions. Service personnel are informed by email or MS teams via the IoT gateway X4 Remote and can determine and rectify the fault accordingly.

The starting point for this is Lenze FAST. Lenze has recently expanded its tried-and-tested application software toolbox into a framework. The digital twin plays an important role in this as well.

At the heart of the FAST framework is a service-oriented software architecture that meets current machine requirements for visualization, IIoT, and the cloud. The framework ensures interoperability with an OPC UA interface. The standard for asset instance data can be integrated into exchange formats of the administration shell or asset administration shell (AAS) in the future. This enables the successive docking of useful services. One example of this is Lenze's asset and error management, in which optimized access to asset information has been supplemented with automated error management.

Machine operators benefit above all from the complete view of machines and systems. Remote access allows machine operators as well as the mechanical engineer's technicians to remotely access framework diagnostic information and efficiently solve problems. This is supported by a ticket system that already contains machine status information.

OEE optimization

OEE is still the problem child in many companies. Minimizing machine downtimes and optimizing throughput times requires the unrestricted availability of relevant information from components and machines. But there is often a lack of data and, even more often, a lack of transparency. That is now changing with OEE & downtime tracking, which provide more transparency in the production process with no additional hardware or sensors. First, the OEE is calculated in the PLC, and the user can visualize the results on preconfigured dashboards. In addition, EASY UI Designer – which will be freely available on the Lenze website from the start of the trade fair – offers the user the option of configuring the visualization independently. Downtime tracking provides advanced analysis options, allowing the OEE factors "availability" and "performance" to be examined in detail.

Lenze relies on OPC UA and MQTT for communication, thus ensuring connectivity for future technologies. The data flow from the PLC to the cloud is guaranteed, and even without a cloud connection, live data can be sent in real

time to a panel or a human machine interface (HMI). This provides the machine operator with more transparency and motivation.

The application is an easy way for mechanical engineers to display machine performance and availability according to their end customer's needs. The end customer can use this data to increase or stabilize his productivity. OEE & downtime tracking is the basis for fact-based production optimization based on real data.

New automation system

In addition to the software and digital solutions, Lenze will also be presenting the corresponding hardware at the trade fair. Visitors will have the opportunity to get a sneak preview of the new i750 servo inverter. This servo inverter will become the new standard element of a future-oriented automation solution with a Lenze controller. Its key features:

- Extended safety & One Cable Technology
- Increased control technology quality
- Extended power range between 15 kW (20 hp) and 30 kW (40 hp)

In combination with Lenze automation system software applications and digital services, the result is a motion control concept that is second to none.

About Lenze
Lenze is a leading automation company for mechanical engineering. With more than 70 years of experience in providing solutions, Lenze is a strong partner standing side by side with its customers. The company portfolio includes high-quality mechatronic products and packages, efficient systems consisting of hardware and software for machine automation and digitalization services in the areas of big data management, cloud and mobile solutions, as well as software within the context of the Internet of Things (IoT).

Lenze employs around 3,900 people worldwide. As part of its growth strategy, Lenze intends to continue investing strongly in Industry 4.0 sectors in the upcoming years – with the aim of further increasing revenues and profitability.

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