



Plant i.T.

Process Control Systems. MES inside.

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Success Story // Paint and Coatings Industry //
Sto, Germany

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ProLei.T.

by **Schneider** Electric

Forging ahead with innovative solutions

How ProLeiT is implementing a cutting-edge, dynamic and fully integrated MES at Sto.

Flexibility is essential when a project is not going to plan. And when this is combined with an extraordinary level of local presence, there is only one outcome: Innovative solutions. This is also the case at Sto, which, with respect to its vertical integration, benefits from cooperation with ProLeiT. Thanks to a fully integrated MES that offers greater transparency, control and optimization options.

The success story of Sto began in Stühlingen in 1955. Today, the Group is a leading international manufacturer of products and systems for coating buildings. It is represented in 38 countries with 50 subsidiaries of its own worldwide. In 2020, the Group had more than 5,500 employees and generated €1.4 billion worldwide.

One solution for four manufacturing plants?

As part of its drive to be sustainable and remain competitive in the long term, Sto invests millions of euros in various sectors of the business each year. Some of this money also flows back into the company's own manufacturing plants, where modernization of the process control technology is a top priority: Besides its manufacturing plant in Donaueschingen, three more plants are to be equipped with a Manufacturing Execution System (MES) from ProLeiT by 2024. This will ensure complete consistency across all levels – specifically in a classic vertical structure from SAP to the control system and back again. The recording of all production data will enable Sto to determine relevant KPIs and continuously optimize operational processes in the future. Further, the company has a quest to become paperless and operate without routing slips.



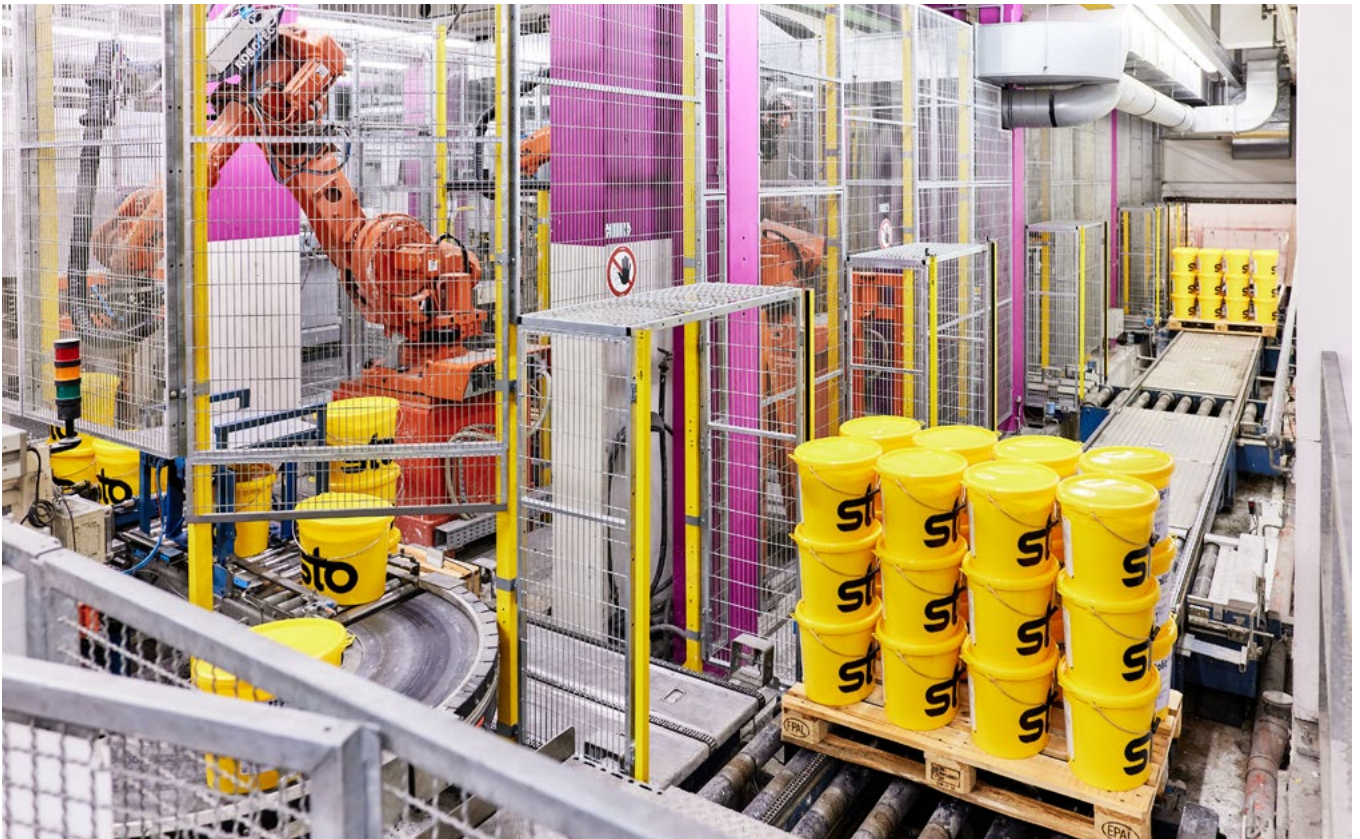
Office complex at the headquarters in Stühlingen, Germany.

sto 

Info

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Palletizing Sto pails filled with paints and finishes, as manufactured at the various locations, including at the HQ in Stühlingen.

The plan was therefore to gradually roll out a holistic solution in the individual manufacturing plants. Any special features of the respective locations needed to be considered in a concise and consistent manner, thereby enabling their integration into the overall solution. This means Sto is not only one of the largest ongoing projects but also one in which the highest level of innovation is required. Since individual solutions have to be developed flexibly and in cooperation with each other to meet the precisely defined targets.

MES Light as the blueprint

The project has had a strong workshop character from the start. The solution built around the Plant Batch iT process orchestration layer and the Plant connect iT interface manager already had everything it needed to meet all the requirements. Only the final touches had to be worked out together. As each phase needed to be considered individually and in extensive detail, the approach was highly complex.

“The retrofit control system was to run independently of the MES, yet everything had to go hand in hand. However, the existing MES at Sto was no longer able to communicate with the controllers, which meant an interim solution was required to move the existing MES toward the retrofit and the used PCS7 controller. However, the MES Light solution developed for this purpose is ideal in that it serves as a blueprint for the upcoming process,” explains Daniel Marschner, responsible Project Manager at ProLeiT, adding: “It accepts the specified recipes and individual batches, subsequently controlling the PCS7 step by step by means of individual instructions. In the end, it will be replaced by the new MES.”

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Sto also has very specific ideas about how to process the individual recipes. It took some convincing on the part of ProLeiT to encourage a more modular approach and to combine the already formulated processes into a handful of standardized ones. However, since the processes can change dynamically depending on the composition of the products, greater flexibility is possible through this level of standardization.

A win-win situation for both parties

The project, which commenced in 2018, is definitely on the road to success. The new MES is already in operation at the manufacturing plant in Donaueschingen; another system is due to be commissioned by the turn of the year and two additional manufacturing plants will follow by 2024. As a result, the innovative MES ensures complete consistency from goods receipt to goods issue across various routes - today, tomorrow and for years to come. Everything can be recorded automatically to guarantee complete data evaluation, inventory management and optimization.

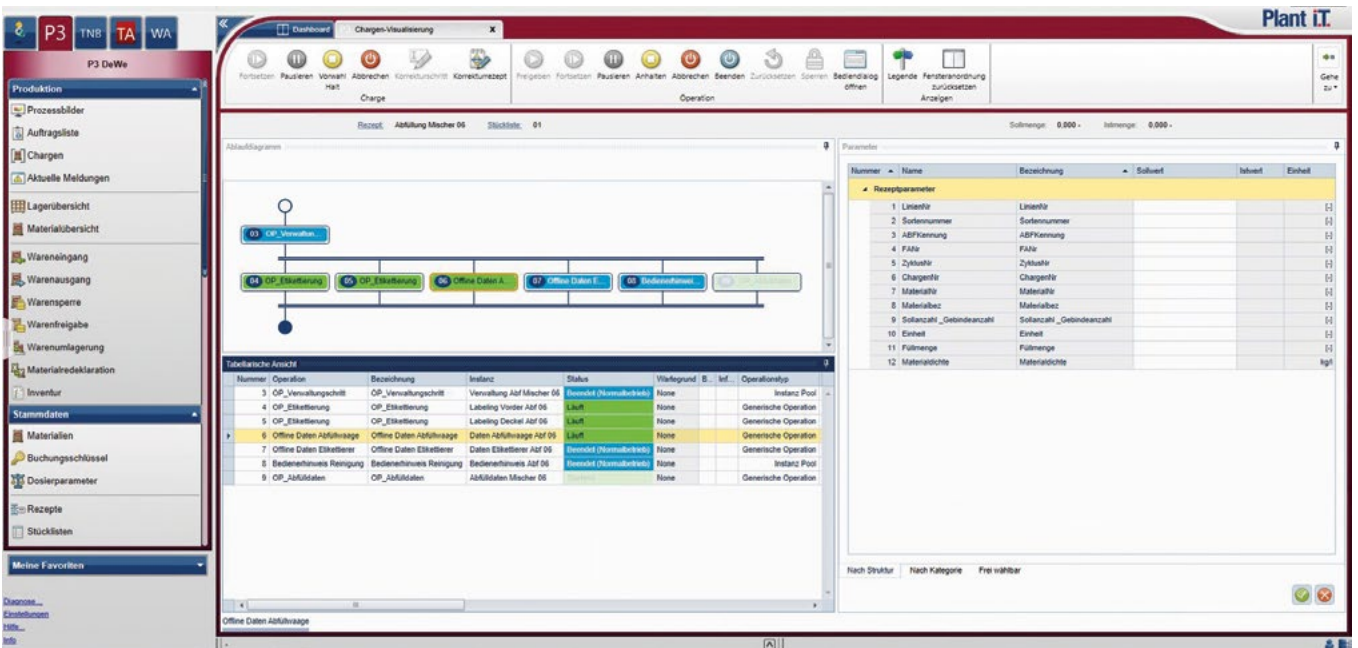
But it is not only Sto that benefits from the overall result, as Verena Mersmann, Sales Engineer at ProLeiT, emphasizes: "When it came to achieving the set goals, we had to become much more flexible, almost agile, throughout the project, rethinking existing concepts and moving innovations forward faster; and the entire Plant Batch iT system has benefited enormously from this. From day one there was strong involvement in the design process, which in the end also enhances the overall project."

Highly innovative and cutting-edge MES

Sto can therefore proudly claim to operate one of the most innovative MES solutions currently available on the market. The Stühlingen-based company is particularly enthusiastic about how flexibly ProLeiT responds to customer needs and that comprehensive support is provided beyond



The control center at Sto.



Screenshot of Plant Integrate iT – the plant-wide MES reporting and workflow management system.

the individual project phases. Accordingly, Michael Blum, Head of Automation and Industrial IT at Sto, also draws a positive interim assessment: “Replacing the existing MES, mapping the complex manufacturing processes and adapting the new system to our existing software services posed a great challenge for everyone involved in the project. However, this challenge was tackled by the ProLeIT project team and was successfully overcome with great commitment and the necessary flexibility.” Sto benefits from a partner on an equal footing that reliably drives the project forward and can also assist in the retrofitting of individual functionalities.

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