

application profile

Beverages // Eckes-Granini



Transparency at all levels

Eckes-Granini benefits from continuous energy data acquisition with horizontal and vertical integration thanks to ProLeiT.

Digitalization is taking shape. This also applies to Eckes-Granini Deutschland GmbH, which has been cooperating with ProLeiT in the field of process control technology since 2012: For seamless horizontal and vertical integration across all processes, from goods receipt to production and filling. And, since the latest project, for continuous energy data acquisition which makes all consumption data available transparently and across various plants.

Hohes C, Granini, Die Limo, FruchtTiger and Yo – the well-known brands of Eckes-Granini Deutschland GmbH are exported to more than 80 countries. The foundation stone of the leading European juice producer was laid as early as 1857 at the company's headquarters in Nieder-Olm, Germany. Today, over 1700 employees generate an annual turnover of more than €900 million.

At the two German production sites in Bröl and Bad Fallingbostel, the company relies on state-of-the-art plants to produce, fill and store juices, as well as to dispatch them to the points of sale. Both factories have been utilizing Plant iT V8.20 from ProLeiT since 2014: The process control system, the line management system (LMS) and the manufacturing execution system (MES) enable seamless horizontal and vertical integration across all processes.

Fully transparent production

On a horizontal level, Plant iT covers all value-added processes from goods receipt, juice mixing and filling to packaging and transfer to the finished goods warehouse. Or as Stefan Ruff, Sales Manager Beverages at ProLeiT, puts it: "Data acquisition starts with receipt of the raw and packaging materials and ends with the transfer of the finished product pallet to the high-bay warehouse."

And the ProLeiT MES is the link to the vertical level that ensures the business management level can communicate seamlessly with the technical process level. With the added advantage that the ERP system is kept up to date on the status of production, almost in real time. Eckes-Granini therefore benefits from a greater understanding of the continuous improvement of processes, procedures and products. This leads to increased efficiency as manual data exchange, which is both time consuming and prone



The production sites in Bad Fallingbostel

INFO

ECKES granini
the best of fruit

Company: Eckes-Granini
Sector: Beverages
Location: Bad Fallingbostel | Bröl
Country: Germany

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application profile

to error, is now a thing of the past. Everything flows together with the MES solution. And back again, if necessary.

Energy data acquisition via add-on

To meet the changing needs of Eckes-Granini, ProLeiT has continuously developed the corresponding systems. In the spring of 2018, the requirement was: To implement a comprehensive energy data acquisition system that complements the existing systems. The aim: To understand in detail how much electricity, water, compressed air, steam, etc. is required to produce one bottle or carton of juice. To identify new potential for even greater energy efficiency through full data transparency. And, ultimately, to also save costs through targeted optimization.

The project began with the installation of additional energy meters at key locations throughout the factories. A task that was completed in next to no time thanks to Eckes-Granini staff and making full use of planned downtime. Another challenge for ProLeiT was to successively link the data from each measuring device with the data from production orders. For example, the Plant Acquis iT EnMS add-on for energy data acquisition was implemented. It acquires meter

data from the entire process level and forwards it to the MES. And thanks to vertical integration, this data is then also available to Eckes-Granini via the in-house ERP system.

High-performance features for comprehensive analyses

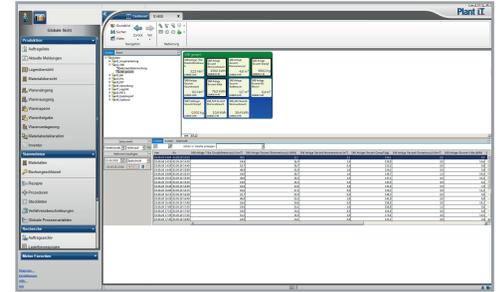
The consumption values are acquired and assigned to individual orders. And since not all the data can be recorded automatically via a corresponding meter connection, the ProLeiT system also enables the manual entry of meter readings. Other comparative values, such as those of local utilities, are transferred to the EnMS via data import. So-called 'virtual meters', whose respective meter readings are calculated using existing physical meters, can also be integrated into the system. For the monetary evaluation of the production figures, ProLeiT has additionally enabled the recording of costs for electricity, gas, water, etc.

When summarizing the advantages of the latest project and those of the long-term partnership, Stefan Ruff says: "In terms of energy, continuous acquisition allows complete data transparency. But what really makes horizontal and vertical integration with Plant iT so special is the seamless linking of the business management and technical process levels. What used to be done on paper is now digitalized at the push of a button and thus much more efficient."

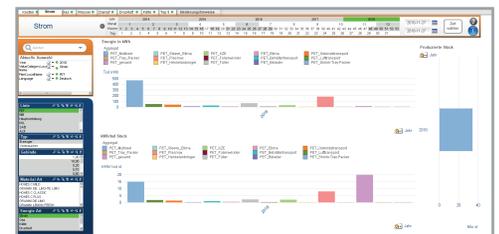
A win-win situation due to greater knowledge

Since the successful completion of the project in Bröl and Bad Fallingbostel in 2019, Eckes-Granini has had access to comprehensive production data for numerous analyses. With the great advantage that it is now possible to determine how much energy is actually required to produce 1000 one-litre bottles. Further, the amount of energy consumed for various container sizes can be compared – even using data from different plants. It takes seconds to calculate the energy costs instead of hours or even days.

Marec Borckenhausen, IT Coordinator and Project Manager at Eckes-Granini, is therefore delighted with the outcome of the project with ProLeiT: "We benefit from state-of-the-art technology in this field: When a filling order has been completed at the filling line, all consumption values and production data are available to us in the MES



Process image Plant Acquis iT EnMS: Consumption levels for juice preparation



Screenshot of ProLeiT dashboards for electricity consumption of the PET line

and thus also in the IT system. Everything flows together. The digital transformation is taking shape."

And the next step for Eckes-Granini Deutschland GmbH has already been planned: The energy data acquisition project was so successful that migration of the ProLeiT systems to Plant iT V9 is due to take place this year at the Bad Fallingbostel site.



Bild aus der Herstellung PET-Linie