

ENERGY SAVING MEASURES ALWAYS UNDER CONTROL

Borgers AG supports energy data management processes on WiriTec® C platform

Borgers SE & Co. KGaA, with its headquarters in Bocholt, Westphalia, is still owned and in the 5th generation under the direction of the founding family. Borgers has practically been an automotive supplier since it was formed in 1866, even if it was at that time horse-drawn carriages that were equipped with wadding. Furthermore, Borgers is one of the oldest recycling companies because the founder of the company, Johann Borgers, was dealing with the recycling of used textiles and made upholstery materials from the tear fibers even then.

Thanks to constant growth, Borgers and its locations and cooperations have developed meanwhile into a global partner to the automotive industry, which is now supplied with acoustically effective textile components from 25 plants altogether. The automotive supplier also uses its expertise in the development of insulation materials for large electrical appliances in the white industry. The group also includes the mechanical engineering specialists Olbrich and R + S Technik. With over 7,200 employees across the entire group, sales of over 820 million Euros are achieved.

Initial situation

In 2011 already, the Westphalian automotive supplier's management board decided to install an energy management system.

Thanks to the support of a competent consulting company, the necessary structural preparations were carried out and the ISO 50001 certification was successfully completed in 2013.



A certified energy management system also requires professional energy data management.

In addition, the insight that the current size of the company with 1,400 employees in two plants would require a powerful software support had matured long ago. That is why Wolfgang Bölting, in his function of overall responsible Head of Energy and Facility Management and energy management officer as well, conducted a first market survey. There was a large number of software providers around, and that is why a master thesis by Christian Schneider at the Westphalian University in Gelsenkirchen came in handy. In his thesis, Schneider examined and evaluated energy data management systems that enable enhanced monitoring of energy-related data in production. This analysis also gave rise to the evaluation matrix upon which Borgers' decision for the appropriate energy data

management system was based. Four suppliers were shortlisted, they were invited to Bocholt for system presentations and had to answer the experts' precise questions.

System selection and decision criteria

In this selection process, WiriTec GmbH, a family owned software company from Bensheim in the state of Hesse, turned out to be the winner. "The evaluation matrix based on our specific practical requirements was of great help," emphasizes Wolfgang Bölting, "because this way we could be sure that we selected the adequate system. Our central decision criteria were both handling and ergonomics of the software, as well as the user menu and the flexibility in implementation. WiriTec was particularly convincing in this respect. Already during the presentation,

It was clear that the functions we requested were immediately available and that there was no need for discussion in the first place. Looking back, we can only confirm that we have selected the appropriate software company.

"As from the end of 2017 onwards, the tracking of measures for certification will be indispensable anyway."

The software also provides valuable support in determining downtimes. "Now, we can see exactly if the system is in working mode or is idle. Determining and, of course, gradually eliminating downtimes is a key topic in the manufacturing industry. The number of respective seminars and conferences speaks volumes.

"We have set up an automation project that helps us reduce or avoid downtimes completely. This increases our productivity," Dennis Kolks confirms. And Wolfgang Bölting adds: "The controllability and, at the same time, the ability to monitor on a reliable database enables us to see whether our energy saving projects also deliver the requested effects."

Once a year, the colleagues from the global plants come to have a meeting in Bocholt. The team around Wolfgang Bölting's team presents their convincing results obtained from energy monitoring. "The attractive GUI of the WiriTec software GUI, and particularly the tiles, are an example for successful user interface creation. From the very intuitive entry level, you can then quickly jump to the individual functional areas," the energy manager summarizes.

New plant in Poland

A new production site is being built in Poland, which will gradually be incorporated on to the WiriTec software platform. In future, all new machinery and systems will be equipped with appropriate meters such that the machines can also be continuously measured.

"This also eliminates the need for time-consuming retrofitting because the machinery is new," emphasizes Bölting.



Since very different user profiles work with the system, ranging from experts to casual users, the possibility of highly flexible configuration of the user's menu is paramount. It was also very important to find a reliable partner, because Borgers, as a traditional company in fifth generation, is committed to long-term customer relationships.

On one hand, other important criteria of software decision were the possibility of comparing several consumption periods in one chart. On the other hand, as part of the measure tracking, it was the the vivid color representation of the results concerning energy efficiency measures before and after their implementation.

"For us, the cost-effectiveness of an implemented efficiency measure and its efficiency is a very central point," Martin Demming, energy manager at the production site in Dingden, adds.

Finally, the implementation of user rights in the energy data management system and the connection options for meters were considered. Up to 250 meters have to be integrated into the system per plant.

Processes supported by the system

The proper tracking of measures taken is a very important component in the realization of the targeted energy saving. Examples include the frequency control of pumps, the retrofitting of lighting systems and the saving of compressed air. "We installed meters on the air compressors, their values flow into the WiriTec software. Thus, we are now able to proactively eliminate the leaks, which generates clearly visible benefits," as Dennis Kolks, energy manager at the Bocholt plant, explains.

Clear benefits also for 'casual users'

The system's look-and-feel is extremely intuitive, which also creates benefits for casual users who do not have to be system experts. This affects both foremen in the warehouse and also those responsible for the machines. In future, they will work with clear dashboards show on-line whether the machine operation is in the green or red range.

In addition to that, there are plans at Borgers to install specific monitors displaying dashboards to indicate specific energy consumption on-line in the production area at any time. This allows everyone to see how their personal conduct influences overall energy consumption.

"Even if energy reports are created and subsequently sent to the individual departments, clear graphical online consumption display on a monitor at shop floor level makes much more sense," notes Martin Demming.

Interaction with the software manufacturer in the project

"We received very good support regarding our questions about setting up a meter structure in the scope of creating a viable measuring concept. In this context, the deep field level knowledge as well as the expertise of both WiriTec consultants and even their CEO, was a really decisive advantage," confirms Bölting. "We did not experience anything comparable with other manufacturers so far."

This fact provided great security, because Borgers was convinced that they did not have a system being incompatible with measuring devices on field level. "As we all know, reading out data from different devices and various control systems is not a trivial thing in everyday practice," adds Wolfgang Bölting.

"There is no question that expertise as well as fast and well targeted support are the prerequisites for successful project implementation."

Outlook on future projects

The topic of monitoring will be an even stronger focus in future. The watchdog function in the WiriTec system provides excellent support on this behalf, and the name says it all.

"We want to achieve a higher granularity of the representation in the system. Furthermore, we will intensify our use of clear dashboards, which we see as a further major application benefit the WiriTec software platform provides," summarizes Martin Demming.

The energy data management system will also be introduced in the new Polish location in Zlotoryja, which is planned for the remaining year 2017 and early in 2018. There are good meter infrastructures implemented right from the start.

WiriTec GmbH

WiriTec GmbH is an innovative, owner-managed software company that specializes in the development of efficient solutions for energy and resource management. Thanks to special know-how and high-performance communication software, WiriTec combines proven and advanced measurement technologies at the field level with the IT world. Our holistic energy data management solutions are certified according to ISO 50.001 and support the entire process from measurement data acquisition to timely consumption visualization to consumption forecasts, billing, energy levies and meaningful energy parameters. Our numerous customers in Germany and Europe are located in almost all market segments, have successfully implemented many projects with our fully web-based solutions for years and have realized significant savings potential. In conjunction with our sister company, speedikon FM AG, we offer comprehensive IT solutions from the field level to commercial and technical data processing.