

WEBfactory® Success Story

Brüggemann



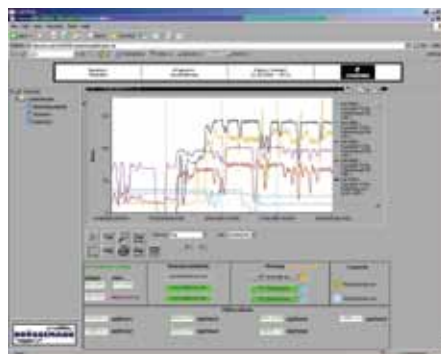
Energy management via the internet

Process visualisation system helps save energy

Permanently price increasing on the oil and natural gas market as well as the growing demands for an environmentally safe production, make an efficient handling of energy currently more relevant than ever in many sectors, for the productivity of a company. Those who want to use energy meaningfully must not only be aware of the current consumption, but also of the load distribution over the day, must know when, which amounts of energy are absolutely required and where and which ones can be delayed to other moments. Only in this way expensive load peaks can be avoided. According to the dimension of a production system, this is a complex endeavour. Energy management systems can solve these problems.

The company Brüggemann from Versmold is a medium size enterprise executing international projects as ordered by customers. In this activity company customers are not only assisted in projects concerning electro techniques, automation, telecommunication technology, security and video technology, IT and network technology. In addition the company offers solutions for the sectors of ventilation, cooling systems, air conditioning, sanitation, heating and pipeline construction as well as solar and environmental technology. For the sector of facility management the company from Versmold has developed a program module, as a result of many years of experience, in addition to their

software for technical facility management, by means of which the user can register, analyse and control his energy consumption. Facility management experts rely on the process visualisation application of WEBfactory GmbH, Buchen.

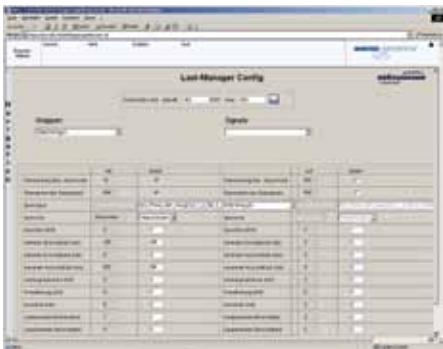


Remote access

On the one hand the target of the energy management system is to reduce energy consumption. On the other hand it is useful to this end, to avoid load peaks and to make the whole energy consumption of a system calculable. This makes the system basically adequate in all cases where "storage-capable" and / or thermostat controlled consumers such as e.g. cooling devices, air conditioning systems, compressors, electric heating systems, industrial kitchen appliances or drying ovens are used. "The Energy Module was created in connection with the project of a customer"

Remote access

Volker Herden, responsible for the management of the electro technical division for Brüggemann remembers. "Energy consumption on his plastic production plant in Birmingham tended to be very high. It is this consumption that the customer wanted to be able to control better and at the same time to be able to see remotely, in this case from Germany, what energy was required at what point, in order to regulate consumption if necessary."



The resulting energy module now includes parameters for all machines used, visualises the load graphs and archives all collected data for at least 12 months. Because remote access was an essential requirement, it is not a coincidence that the energy module was developed based on the WEBfactory process visualisation software. "We have been using this process visualisation software for some years now" Herden declares. "We met with WEBfactory first five years ago, when one of our customers also wanted to access and be able to set his system remotely via the internet. At that time there were only very few process visualisation softwares available, capable of implementing web standards consequently. Because process visualisation had proven itself in various applications, we also relied on it in the development of our energy module". In the application described, the customer can connect from his headquarters in Eastern Westphalia with his plant in Birmingham.

Optimisation of clever concepts

The specialist from Versmold invented a clever facility management concept for the actual energy management. Instead of working with fixed maximal values, the energy module uses sliding maximal values. Since the energy consumption depends on the operating state of the individual system components, the system not only measures the energy consumption for every machine but also the operating state. "While a fixed maximal value always shows the most unfavourable consumption of a system, the sliding maximal value represents the state of the system more authentically. Thus the energy consumption can be better managed" Herden explains. As additional information for energy management the minimal and maximal operating and standstill periods are used, also to be chosen freely for each machine, depending on the operating state. In addition to the lead peak regulation every consumer is assigned a priority. According to this priority they are activated or deactivated, based on a predefined model. The setting of off-periods also avoids the deactivation of important consumers.



Standardised Interfaces

In the meantime the energy module has proven itself also in other individual cases. "One of our customers in the Czech Republic had less energy at his disposal than he needed and was therefore practically forced to implement a carefully thought-through energy management system" Herden observes. To this end all the system states must be recorded at first and sent to the central processing unit.



However, because existing bus structures often use systems from different manufacturers, the data exchange is not always simple.

This makes it very useful, that the process visualisation software used supports OPC as a standard. Thanks to the standardised interface, the energy module now works with components of any random OPC-capable bus system, so it can simply be retrofitted also in case of existing bus systems. System states can thus be recorded easily and system components can be activated or deactivated via corresponding outputs. For the user to keep the overview, the energy consumption is represented in trend graphs. The design of the interfaces of the whole system can be adjusted to the wishes of the customer. Thanks to integrated alarm management error messages can be sent from the energy module per e-mail or SMS. Via the additional module WEBfactory MessengerPro alarm messages can be sent based on contingency plans or escalation tables. In general the process visualisation software of the Buchen enterprise can present several of its strengths at the same time in the described applications, such as standardised interfaces, thanks to OPC, web server basing, flexibility and good support.

