

Surface finishing and filter expert opts for consistent engineering

Surface treatment and finishing requires a wide variety of highly complex systems for pre-treatment, powder coating, painting and drying, as well as for automation relating to transport and the handling of parts. The relevant engineering is also accordingly complex. Rippert Anlagentechnik works for this with Engineering Base (EB), which is developed by the software developer Aucotec.

The Surface finishing and filter expert Rippert Anlagentechnik GmbH und Co. KG, which has maintained its position in the market for over 45 years with painting and filter systems, automation and industrial fans, is an experienced plant construction company in this sector. Its growth and the constantly increasing demands for highly automated systems led the East Westphalia-based surface finishers to search for a modern engineering system which would grow in tandem and be viable for the future.

Data and information integration as a topic

Consistency was the central topic in the search conducted by the plant construction company. The desire for significantly more consistent processes was the driving force behind the decision. "Out of all providers considered, only the software developer Aucotec with Engineering Base (EB) was able to fulfil an entire project's requirements from the process engineering flow diagram (P&ID) to control technology," recounted Thomas Quante, Head of I&C Design at Rippert and EB administrator and key user Thomas Möller. The North German system house celebrated its 30th anniversary in 2015 and succeeded in achieving sales growth of around 80 % in the last six years, mainly due to the database-driven software EB.

From sales via processing and manufacturing to commissioning, all disciplines access the same common data model to view or edit engineering information. EB's database and object orientation as well as its special multi-layer architecture make it possible. The central data storage enables even highly complex tasks to be completed quickly and cooperatively, also across multiple sites. The application server connecting the client and database relieves the client's computer and manages the business logic with its elements and logical relationships to each other. "With EB, different

designations of a component in various documents are as much a thing of the past as time-consuming comparisons of load and field device listings that were created at the start of a project," reported Quante.

"It's worth rethinking"

Function-oriented assembly formation is now an important focus for the engineering process because it creates reusable standards which significantly minimize errors and coordination work. The assemblies are formed from individual functions with underlying circuit components or circuit diagram pages. According to the administrator Möller, the structural creation of functions requires another work method, but it's worth rethinking. He explained: "Functional orientation saves a significant amount of time and divides the sub-systems very clearly to boot."

Clean break with the introduction of the new system

"We have made a complete clean break with the introduction of the new system. This means that we still use the previous tool for old projects, but design all new projects with Engineering Base," explained Thomas Quante. In doing so, Rippert derives the new standards from existing projects. However, the circuit components and functional assemblies are still always checked again before storing these standards in EB's database. Thus users can always rely on a high quality standard also. Rippert implemented the conversion gradually for small groups of employees. "The switch was not all plain sailing because the new system signifies a completely different approach, but we have recognized EB's potential and are coming ever closer to our goal of seamless consistency with it," reported Thomas Möller.

Data consistency at all times

Currently, the engineers are working on the EB link to the also new ERP system. The aim is to be able to respond swiftly and comprehensively to necessary adjustments and ensure data consistency at all times. Additional attributes were developed for material types to adapt the EB device master data to the ERP database. In this manner, the search structure remains clear in both systems.

Rippert's I&C Design department will now gradually adjust the new system to its own specific requirements. Knowing the possibilities of Engineering Base, the I&C Design experts want to make the most of it. "EB's flexibility is open to further requests and requirements on our part and is thus also future-proof in the longer term. Its consistency is already exceptional now," concluded Thomas Quante.

Photographs: Rippert Anlagentechnik, Germany

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Power range in the cabinet for four booths; project structure in Engineering Base (EB)

About Aucotec

Aucotec AG has over 30 years of experience in developing engineering software for the entire life cycle of machines, plants and mobile systems. The solutions range from flow diagrams via control and electrical engineering for large-scale plants to modular harness design in the automotive industry. Aucotec software is in use all over the world. In addition to its headquarters in Hanover, Aucotec operates six further sites in Germany as well as subsidiaries in China, South Korea, France the United Kingdom, Italy, Austria, Poland, Sweden and the US.

Production hall with pre-treatment facilities at Rippert works with a perfectly designed information system