

HANS HUBER AG

Succeeding with EPLAN in wastewater treatment

Going modular accelerated design

Water consumption tends to produce a great deal of wastewater that has to be treated before being discharged back into the environment. About 125 liters of water is consumed by each German every day, and private households account for only 13% of total water consumption. Industry accounts for over half, and agriculture another third. As water becomes more scarce in some countries, treating polluted water and effluent becomes more vital to humanity.

Leading global player

Hans Huber AG of Bavaria has earned a worldwide reputation for its innovative solutions in waste management and sludge treatment. Founded in 1872 as a coppersmith and still family-owned, it now offers a wide spectrum of products and technologies for wastewater treatment with a workforce of 800 and an annual revenue of over € 95 million.

“ Hans Huber AG, a leading global manufacturer of wastewater treatment systems, uses EPLAN PPE for its electrical instrumentation and control (I&C) engineering. EPLAN PPE automated functions previously done manually, resulting in a modular system for designing instrumentation and control components that has accelerated project development while minimizing the potential for errors and omissions. ”

ePLAN your **engineering**

EPLAN PPE

supports

Huber's growth

“We always develop and produce on a product-specific basis and are very flexible in the process, since our high degree of vertical integration allows us to react to a very wide range of requirements,” says graduate engineer Martin Springs.



Huber's wide range of products is a competitive advantage; essentially a one-stop shop for treatment needs – big and small. The company's design and planning department is correspondingly large and works closely with the production and project management departments.

I&C engineering as a link

At the heart of each product is the I&C engineering. Measuring devices and sensors track values such as fill level, flow rate and moisture content/degree of dryness and analyze the oxygen content and pH value. Matching the I&C with the hardware design is a task that demands close cooperation by Huber's electrical and mechanical engineers with the project manager. This work used to be done manually: The mechanical design team drew up a piping and instrumentation diagram using AutoCAD®. The loop numbers were assigned manually and data transferred to an MS-Excel® file, a practice that was especially time-consuming when it came to making changes.

EPLAN PPE structures projects

“We had a very close look at various design automation systems,” said Martin Springs. EPLAN PPE was the winner hands down. EPLAN PPE is open architecture software for process plant engineering that facilitates the exchange of data among departments participating in process design. Huber liked the way EPLAN PPE structures projects, organizes and evaluates data and specifications, and how it can change the contents into one of several supported languages with a click of a mouse; Huber has subsidiaries, customers and suppliers around the world.

Set up bank of standard subsystems

Huber paced the introduction of EPLAN PPE within the I&C design program. “In the first months after implementation, we first generated assemblies and modules for a database within PPE,” says Springs. “Our aim was to create small units with which we configure our I&C systems. At the same time we created larger units which we use more often in the form of modules.” Examples of such modules are gate valves with limit switches or solenoid valve combinations. During design, the instrumentation components are usually linked directly to the corresponding drives so that records

PERFECT BALANCE

between automation
and flexibility

for complete units can be inserted at the click of a mouse. When the specific data such as drive ratings or piping diameters are inserted, the software calls up the appropriate components.

Each product unique

Designers may borrow data from previous projects, but each new product has a degree of uniqueness. "Each one starts with the customer's requirements," says Wolfgang Schmidt, project implementation head for I&C engineering. "That determines the degree of automation required and the component suppliers, after which we select the assemblies and modules, link them and create the documentation for the enclosure and field operation."

Automation and flexibility balanced

Accessing inventory data speeds up design work. Changes carried out on one level, like substituting one sensor for another, automatically revises all related values throughout the project, including all associated lists and assembly drawings. Past headaches with making modifications manually have been forgotten. And in EPLAN PPE, the designer can start working at any point such as the definition of the process system structure, device specifications or cable data. A change made on one level modifies the entire project, speeding up planning while eliminating errors and inconsistencies.

Supports purchasing department and suppliers

Documents generated by EPLAN PPE include a requirements list for requisitioning parts that is forwarded to the purchasing department. The master parts data file from the ERP system is stored and updated in EPLAN PPE and the latter generates precise documentation for the design and manufacturing needed by Huber's enclosure supplier.

"This database has proven itself in day-to-day operations. The I&C designers have found the right balance between automation and flexibility," says Schmidt.



The documentation department already uses the EPLAN PPE data as the basis for the project-specific documentation. In the future, Huber may also use it to automatically generate all process descriptions and operational workflows.

EPLAN PPE added structure to design SUMMARY

Well-equipped for the future

With EPLAN PPE, Huber AG, a leader in the global wastewater treatment business, sees itself well-equipped for future challenges, including further growth. Facing an increasing volume of orders for its wide range of products, it turned to EPLAN PPE to automate key functions of the design and pre-manufacturing processes done manually. That added structure to its design process and Huber built a database of frequently-used assemblies and modules within EPLAN PPE to further accelerate project development.

Find out more about Hans Huber AG on www.huber.de

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