



Bentec GmbH Drilling & Oilfield Systems

The Global Player for flexible drilling technologies uses the multifunctional CAD and PDM solution “Made in Germany”

Mineral oil and gas are among the most important energy sources in the world. The company Bentec GmbH Drilling & Oilfield Systems has set itself the task of constructing durable and technologically sophisticated drilling rigs, complete with drilling towers and sub-structures that can resist all climatic conditions worldwide. Mechanical drilling components as well as electrical main drilling and control systems complete the product range offered by this system provider, who HiCAD for design tasks and also has installed HELiOS in almost all technical departments.

Die Bentec GmbH Drilling & Oilfield Systems is a self-contained subsidiary of the Scottish KCA Deutag Group, which is one of the biggest international oil and

gas industries, and, with its about 400 employees and 70 trainees, one of the biggest training enterprises in the Bentheim County region. Furthermore, it has subsidiaries in Russia and in Oman. Since its foundation in 1994 the company has been working with the ISD Software und Systeme GmbH, the Dortmund-based developer of



REFERENCE REPORT



Left image: Bentec Top Drives for improved drilling results
 Right image: Bentec Iron Roughneck for pipe handling operations
 Image below: Bentec Euro Rigs for small and sensitive locations
 (© Bentec GmbH Drilling & Oilfield Systems)

the CAD software HiCAD and the PDM software HELIOS, to enable an even faster and more efficient construction of its custom-made drilling systems on a total of 25 CAD workstations. While in HiCAD the Steel Engineering functions are of particular importance, almost the complete range of HELIOS functions are relevant to the design process, explains Malte Cordes, Development Engineer at the Bentec GmbH Drilling & Oilfield Systems.

HELIOS integration via HiCAD interface

Malte Cordes, who has already dealt with the topic of PDM/PLM during his engineering studies, pushed forward the integration of HELIOS into existing corporate processes: “To avoid redundant data, we did not want to buy just a new archiving system, but a complete system allowing quick data access while automatically ensuring that the data are kept up to date at any time. Simple data release processes seemed too slow and outdated to us.” The decisive factors for the implementation of a PDM system were, according to Cordes, “the bidirectional management of part masters via the existing ERP interface, as well as the interfaces to the printing system and the CAD system HiCAD”. In 2013, the old archive system was eventually discarded, complete with the file system in which CAD data used to be organized with the help of numerous Excel lists.

HELIOS in department-relevant processes

“At the Bentec GmbH, HELIOS is used in the departments Purchasing, Sales, Production and Engineering”, explains Malte Cordes. “In the Engineering department, the management of both Office documents and CAD data is required. In Electrical Engineering, only documents are being managed. In the other departments, the HELIOS Viewer is being used, in order to be able to

view updated data at any time. Due to the fact that multiple colleagues are always involved in a project, each of which is responsible for his/her own construction unit, the engineering process is subject to constant change. Via the referencing of assemblies, which have been write-protected by HELIOS, we can now optimize execution planning. With a PDM system our data can be protected against unwanted modifications and can be easily retrieved at any time.” Besides CAD model-spanning processes, system-spanning processes, too, played an important role for the bringing in of HELIOS: “Most notably, CAD applications and MS Office documents. To be able to transfer calculations, inspection reports or data sheets to the linked ERP system, a smooth, error-free communication across multiple programs such as ERP, PDM and MS Office is absolutely essential“, explains Malte Cordes.



HELIOs for a secure flow of information with automated Workflow

“With HELIOs we could not only optimize and partly automate our release and archiving processes, which in turn speeded up our engineering processes, but we could also reduce error rates and increase data security through defined user groups and article master data significantly, always keeping an eye on ISO 9001 compliance of our Quality Assurance in the process“, says Malte Cordes, who plans to use the Workflow concept of the PDM system even more extensively in the future.

HELIOs impresses by performance and speed

It took 3 or 4 months at the Bentec GmbH until the decision in favour of HELIOs was made. “The possibility to keep our data constantly up to date was a major purchase reason. Also, a SAP solution would have involved too much customizing. But the already existing HiCAD interface was not the only reason for our decision; what also impressed us was the direct contact with

the ISD and the competence of its staff”, says Cordes. The implementation did not take place step-by-step, but entirely on a fixed date. The ERP interface was then implemented step-by-step, and, finally, the complete Workflow concept was added”, remembers Malte Cordes. Initial concerns about the necessity of mutual visits and to enrol in training courses about article-based working and structured data preparation could be dispelled quickly.

“Of course, traceability of all working steps will increase the focus on the performance of the individual employee; with a PDM system, processes will become standardized and more transparent. But that’s how it is: One of the greatest challenges in such situations is certainly to convince your colleagues of the new system and its working method.” says Malte Cordes, who could prove the efficiency of HELIOs by way of meaningful figures after a period of only 12 months: “The time required for release processes of parts and drawings could be reduced by more than 60 % – gi-

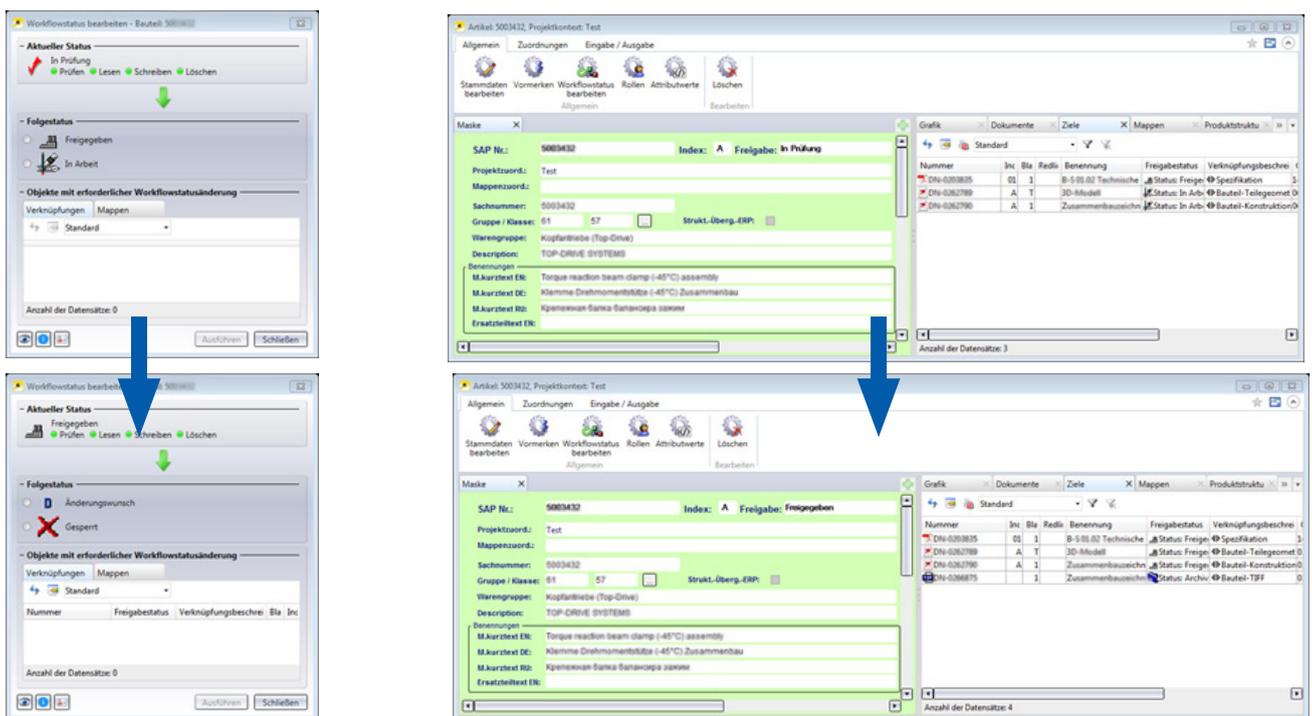


Image: Release process and workflow-controlled generation of neutral formats (© Bentec)



“The time required for release processes of parts and drawings could be reduced by more than 60 % - given the multitude of drawings that are created at our company in one year this really is a huge progress.”

Malte Cordes, Development Engineer at Bentec GmbH

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Outlook: Further cooperation with the ISD Group

In addition to the numerous advantages offered by HELIOS, the development engineer has made some suggestions how to enhance and perfect the system even further. Most of them have already been implemented in the meantime: For instance, the import with E-mail attachments directly from Outlook mails via Drag&Drop. “Also great would be the possibility to link folders and projects and sort them by an order of your choice. Or the option to change the responsible person manually rather than only via function while the status is set to ‘In progress’”, suggest Malte Cordes. Since the project progression has been more than satisfactory, the project “Industry 4.0” has now been initiated together with the ISD Group.

In brief:

- › Bentec GmbH Drilling & Oilfield Systems Industry
- › Mechanical engineering, plant construction
- › Software: HiCAD and HELIOS, SAP
- › Services: Engineering, Design and production of drilling devices, mechanical drilling components, electrical main drilling and control systems
- › www.bentec.com



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