seele GmbH

Spectacular high tech architecture created with top performance software

The worldwide leading role of the seele GmbH in the realization of extraordinary building shells is the result of the work of renowned architects, highly specialized staff members and multi-CAD capable software including BIM solution and PDM/PLM integration. The sustainable all-in-one solution for civil engineering consists in a combination of HiCAD and HELiOS by the ISD Software und Systeme GmbH.

The company is located in the Bavarian city Gersthofen near Augsburg and was founded in 1984 by the master glazier Gerhard Seele and the steel engineer Siegfried Gossner. seele creates ground-breaking building shells in the form of steel/glass combinations, all-glass constructions, membrane constructions or element facades all around the globe. 1.000 employees in 12 locations develop, test, produce and assemble the spectacular facades. 20 % of the employees work in the engineering office.

REFERENCE

I·S·D

THE WORLD OF CAD AND PDM SOLUTIONS

Assembly of up to approx. 7 x 4 m SCF elements for the Principal Place Commercial in London. (Courtesy of René Müller, seele GmbH)
Front cover: The Principal Place Commercial in London. (©seele)

"We use almost all HiCAD modules for our projects. The interactions between all components of HiCAD and HELiOS and the know-how of highly specialized employees allow us to benefit from what can be called a perfect workflow", explains Heiko Ulrich, Team Leader CAD/PDM at seele GmbH.

Perfectly trained

After a number of target-oriented workshops and individual training courses conducted by the ISD Group the company began with the implementation of HiCAD and HELiOS in October 2014. "The cooperation with the ISD works very well", says Heiko Ulrich. "We knew that the implementation required time and money and that both the Management and motivated staff members had to put their skills and ambition into it. We have been working with HiCAD and HELiOS for three and a half years now and are already using the solutions of the ISD Group on most of our 100 workstations."

Multi-industry capable

"We are working on projects in which the different HiCAD modules are of great help", praises Heiko Ulrich. "The modules we use include HiCAD Steel Engineering, Metal Engineering and Sheet Metal. And last but not least, the HiCAD Freeform Surfaces module enables us to realize very complex glass constructions." One of the latest prestige projects realized with HiCAD is located in London: The Principal Place Commercial. The puristic-energetic building shell spans 28.000 square metres and features a wide range of part variants and facade elements that would not have been realizable without HiCAD's special functions for glass, metal and facade engineering: Steel-glass atrium roofs on 600 square metres, a glazed staircase facade on 2.700 square metres, aluminium facades on 2.200 square metres, sheet metal cladding for hallway walls on 3.500 square metres; furthermore, 6.600 square metres of sheet metal cladding for columns and, finally, 650 square metres of sheet metal cladding on ceiling soffits.

Multi-functional

Furthermore, automation in design processes plays a very important role for Heiko Ulrich, e.g. the automatic generation of bills of materials, drawings and 3-D modelling. "We design everything in 3-D and derive our detail drawings from the 3-D model. We use parameterisation for simpler, API programming for more complex constructions." The CAD solution of the ISD Group also makes the production of variable quantities, various sizes and for smaller storage spaces much easier. "Thanks to accurate preparation with a consistent, interfaced 3-D planning and parameterisation this is no problem for us." Working with standardized systems such as BIM enables a linking of processes, which in turn allows a cooperation of all parties involved in the supply chain, an efficient exchange of information and, finally, facilitates decision making throughout the whole building life cycle. "Whether private or public clients, architects or construction companies – nowadays, all of them expect to get their digital data from shared databases", explains Heiko Ulrich. For Building Information Modelling, which has become a common practice since 2016 and is to become a standard throughout Germany in 2020, seele uses the IFC interface of HiCAD in conjunction with the PDM/PLM system HELiOS.

The seele GmbH in Gersthofen is the origin of the global seele group.
(Courtesy of: René Müller, seele GmbH)

Multi-CAD-capable

A systematic storage of information and the provision of construction data, deadline planning, protocols and cost calculations are mandatory for the maintenance and operational control of buildings. Changes at short notice and new deadlines require an easy and secure management and documentation. Double data storage must be avoided, and a global access to data at construction sites or workshops must be ensured. Prior to the implementation of HiCAD and HELiOS with the help of the ISD, the IT infrastructure with Vault Server and database was built", explains Heiko Ulrich. "Our aim was to transfer the dimensions in AutoCAD 2D to a 3-D CAD system with PDM. We wanted to create a 3-D model the bills of materials of which were to be transmitted, without any rework, to the PDM system and, after this, to the ERP system. Other aims were to reduce the number of drawings and to transmit data, if possible fully automated, to the production machines, to enable digital access by other departments to current drawings and NC data and in doing so, minimize errors during production and final assembly. The consistent utilization throughout the project and the creation of interfaces to other CAD systems were also our intention."

The conclusion of Heiko Ulrich is absolutely positive: "The application runs smoothly and error-free." While appreciating the detail planning with AutoCAD during his daily work, he mostly relies on HiCAD and HELiOS for advanced developments: "The creation of project articles, workshop planning with the correct articles for BOM creation complete with parts where-used lists, the automatic document generation via STEP and PDF files, the creation of the BIM model via the IFC interface or the 3-D DXF/DWG interfaces for a rapid data exchange between architect's offices, engineering offices and specialist planners are among the functions that support us in our daily projects. Very efficient for a smooth workflow at our company is the elimination of redundant data. Instead, we can be sure that we always work with the most recent state. Also, the staff in the workshop have direct access to HELiOS, and on the construction site, access to HELiOS is ensured via the HELiOS Internet Server."

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Heiko Ulrich, Team Leader CAD/PDM, seele GmbH

Coming soon

"We are currently testing further HELiOS functions and the HELiOS Internet Server", announces Heiko Ulrich. Together with the ISD we are planning an interface to our ERP system and the linking of two more CAD systems to HELiOS."

Furthermore, seele GmbH is currently looking for employees, as can be seen on the "career" page of its website: Whether structural engineer, BIM coordinator or CAD designer – all applicants are supposed to have good HiCAD and/or HELiOS skills, which is an unmistakable proof of the sustainability of the ISD solutions.

In brief:

› seele GmbH
› Industry: Architecture, Steel and Metal Engineering
› Software used: HiCAD, HELiOS et al.
› Specialist in: Steel/glass/aluminium/
   high tech material facades
›
   www.seele.com

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TA strong partner for your success

See for yourself what our solutions can do. We would be delighted to show you the advantages of our software solutions in a personal presentation. Contact us to arrange an individual appointment – we are looking forward to meeting you!

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