

An integrated SAP/PLM strategy generates immediate results

Solid Edge seamlessly integrates multiple design locations for improved product development efficiencies and product quality

ROFIN-SINAR LASER GMBH

Siemens PLM Software

www.siemens.com/solidedge

► Business initiatives

New product development
Production efficiency
Value chain synchronization

► Business challenges

Integrate multiple design locations
Improve drawing quality and the flow of information
Produce a broader product portfolio with low parts spectrum
Build knowledge basis in the company

► Keys to success

Introduction of Solid Edge for digital product development
Drawing management with SAP/PLM
Plot management for drawing automation

► Results

Improved efficiency across multiple organizations
80 percent reduction in costs associated with automatically creating parts lists
Elimination of errors
Ability to build more systems with the same number of personnel
Significant improvements in quality of internal information and communication

Rofin-Sinar Laser GmbH started 30 years ago as a pioneer producing laser for industrial material processing. Today, with more than 1,600 employees and more than 28,000 installed lasers, Rofin is a worldwide leader in a variety of laser technologies and applications.

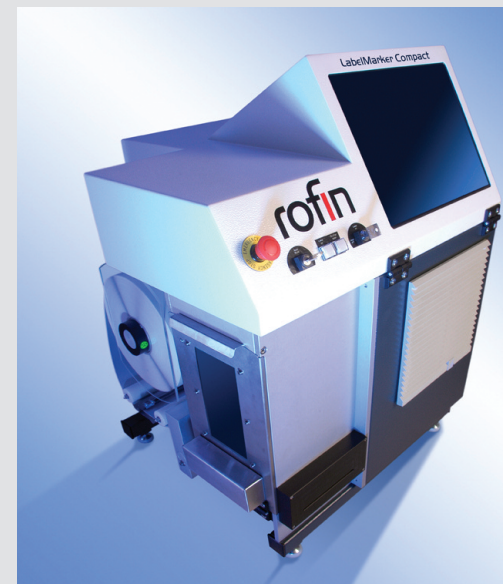
The four locations Rofin-Sinar Laser GmbH in Hamburg and Günding, Carl Baasel Lasertechnik in Starnberg and Dilas Diodenlaser in Mainz work together closely. In the past these four facilities used varying CAD systems that included AutoCAD Mechanical Desktop, Inventor and others. "We unquestionably had a heterogeneous environment that resulted in heterogeneous results," says Andreas Schaller, CAD Administrator, ROFIN Group. At that time Schaller was project engineer for the Günding location and was directly involved in the selection process for an integrated solution. "It was our objective to facilitate effectiveness among the four locations by using a single CAD system," continued Schaller.

Handling drawings was one of the first questions to be addressed. Since SAP was available at all locations as the ERP system, Rofin-Sinar quickly recognized that product lifecycle management (PLM) software was the obvious choice for uniform, plant-wide handling of drawings. "A tight integration between SAP and PLM was an important requirement," said Schaller. "At the same time, we wanted a cost-effective 3D CAD solution that was also robust and easy to use."

Demanding selection process

Rofin-Sinar initiated its selection process by re-evaluating the existing solutions as well as considering other contenders, SolidWorks and Solid Edge® (from Siemens PLM Software, represented by PBU CAD-Systems, GmbH, an authorized Solid Edge reseller). "After meeting with representatives from Rofin-Sinar and hearing the company's requirements, we were certain that Solid Edge would meet their objectives," said Gerhard Grüner of PBU CAD-Systems.

Rofin-Sinar set up a one-day workshop during which each of the competing suppliers was given the identical task of importing data from one of the company's large product modules and providing a demonstration of how its solution would handle additional processing during a performance test. "Only Solid Edge was able to successfully complete the task," said Schaller.



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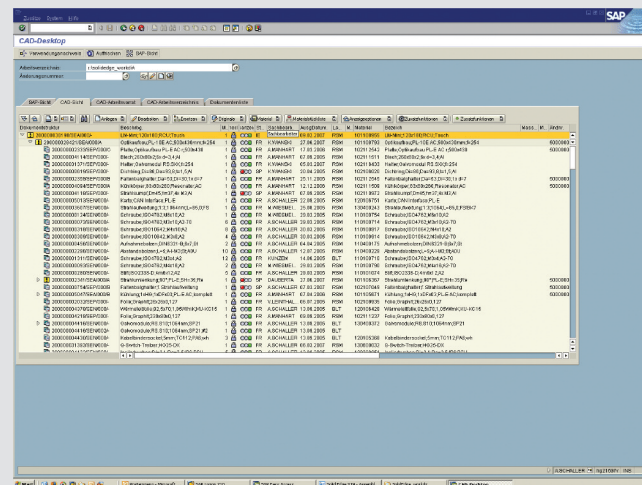
“Everyone was impressed by the software’s ease of use and agreed that the workshop was, indeed, a success.” Rofin-Sinar made the decision to deploy 50 licenses of Solid Edge among three of its development sites in Germany.

Solid Edge in production

Four years later, there are now over 60 licenses of Solid Edge deployed among Rofin-Sinar’s four locations in Germany, and it is used in the development of all new design programs. “Solid Edge is an ideal solution for us and significantly more stable than our former technology,” said Schaller. “We’ve noted particular strengths in Solid Edge for sheet metal design, 2D drafting and visualization.”

Sheet Metal

A core design capability of Solid Edge is the Sheet Metal environment. The solution streamlines the entire sheet metal product development process, from the design of sheet metal components through flat pattern development and the creation of engineering drawings. “We’ve found Solid Edge very convenient in visualizing the folding and unfolding of components,” said Schaller.



2D communication with suppliers

“Solid Edge produces drawings with model data valued for its depth and breadth of detail,” commented Schaller. “However, the use of 3D-dimensioning is not consistent within our supplier community where paper is often the communication vehicle. In these instances, we’ve found the 2D drafting capabilities within Solid Edge extremely useful.” Solid Edge 2D Drafting is a full functioning and fully associative 2D drafting capability.

With Solid Edge, the integrity of shape and positional tolerances, extensive dimensioning and other critical data is automatically maintained.

Standardized representation

“Solid Edge offers functional convenience for standardized representation,” said Schaller. The software allows for the use of customized templates for the generation of drawings that result in a standardized representation of components. “The fact that you can very quickly get an accurate drawing is a very strong point,” continued Schaller.

Visualization Environment

Solid Edge generates quick and accurate product renderings at any stage of the design process with a module called Solid Edge Virtual Studio+. High-quality, photorealistic renderings are routinely used in marketing materials and client presentations. "Our clients are consistently asking us for more and more realistic 3D models," commented Schaller. "We can quickly and easily generate these with Solid Edge – anytime during the design process – while still maintaining the confidentiality of the product data."

Integrating SAP and PLM

By integrating SAP and PLM, all of the drawing data is centrally located. Upon release, the data are converted to PDF files that are available to all departments throughout the enterprise. An example is explained here by Daniel Grau from the design department at Dilas Diodenlaser in Mainz. "Our design department uses Solid Edge with an SAP interface," commented Grau. "As a result, even demanding product designs can be noted and quickly converted into drawings and parts lists."

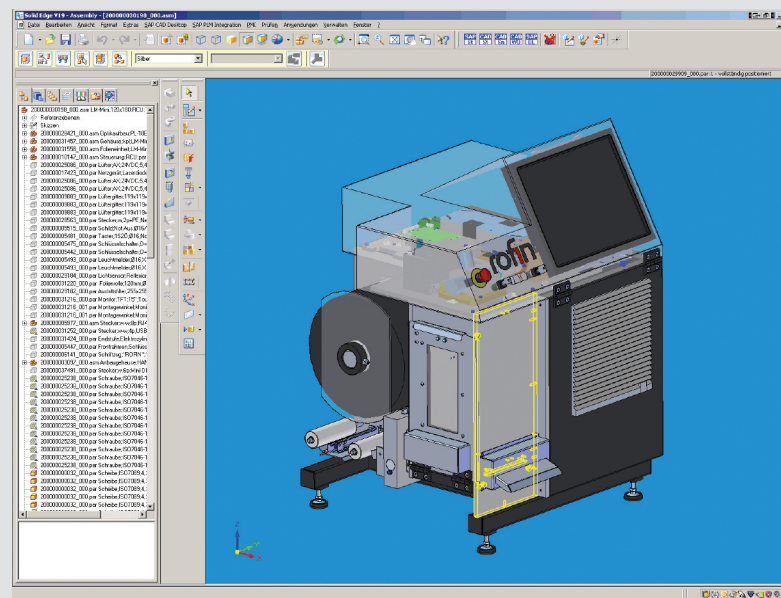
In the near future, Rofin-Sinar will also use generated product structures to automatically output product drawings. "Previously, we were incurring huge expenditures in keeping our suppliers sufficiently informed," said Schaller. "Today, we quickly write a CD; and, plans are underway to use electronic thumbnails as replacement for expensive parts catalogs."

Engaging PLM for improved economics

Rofin-Sinar Laser understands the importance of PLM integration. With the introduction of Solid Edge, the company established a policy of using the material number as the central reference for all 3D parts, drawings and purchased parts. The automation of this process through Solid Edge led to clear efficiency gains. "It typically takes three to four weeks to build a special purpose machine," reported Schaller. "Prior to Solid Edge, it would take us two to three days to prepare an associated parts list – often consisting of 1000-2000 part entries – for the already completed sub-modules. With Solid Edge, it now takes us only four hours to have a parts list in hand."

The company has also recognized savings in inspection expenditures and a clear reduction (or near elimination of) errors, previously common before implementing Solid Edge.

"Using Solid Edge to integrate our multiple design plants is definitely paying off for us," said Dr. Armin Renneisen, managing director, Rofin-Sinar Laser GmbH. "The design divisions are easily adapting existing



Solutions/Services

Solid Edge
www.siemens.com/solidedge

Client's primary business

The design and manufacture of lasers and laser-based solutions for industrial materials processing
www.rofin-sinar.com

Client location

Hamburg, Günding, Starnberg
Germany

"Using Solid Edge to integrate our multiple design plants is definitely paying off for us. We absolutely recognize the benefits of continuing our PLM initiatives."

*Dr. Armin Renneisen
Managing Director
Rofin*

components rather than reinventing new ones. Effective parts management is resulting in significant cost savings in both warehousing and production. In addition, we are using existing data to effectively communicate with our suppliers and to support other activities like purchasing. We absolutely recognize the benefits of continuing our PLM initiatives."

In the future

Rofin-Sinar Laser recognized that the changes made over the past few years only represent the groundwork for its PLM strategy. "With the introduction of Solid edge and the coupling of SAP, our path to PLM has just begun," says Schaller. Additional tasks are pending in the area of document management. Master data sheets of purchase parts to all locations; product documentations; work plans for production; test instructions for quality assurance; electrical plans or installation instructions for installers; and, the list goes on. "We are rapidly moving forward with this list," said Schaller, "as we realize the potential efficiency gains with effective planning and implementation of our PLM strategy."

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