SIEMENS

Solid Edge • Teamcenter

Verhoeven Oss BV

Adding functionality without increasing lead times

Industry

Industrial machinery and equipment

Business challenges

Improve product quality and functionality

Decrease delivery times

New product development

Commonization and re-use

Production efficiency

Keys to success

3D design process integrated with PLM

Digital product validation

Up-to-date information guaranteed by PLM system

Improved data access fosters standardization and data re-use

Suppliers work from 3D models

Results

Reduced order lead times

More functionality added to the machines

Better product quality; improved look and feel

Fewer production errors due to first-time-right designs

The use of Solid Edge and Teamcenter improves design quality, promotes data re-use and reduces production errors to get better machines to customers faster

Transport systems in all sizes

Verhoeven Oss BV Engineering Works designs and manufactures internal transport systems for an international market. Its customers operate in a range of industrial sectors, including food processing, automotive and building materials. The company's products range from small assemblies, such as small roller conveyors, all the way to entire factories, and from conveyor systems for pot lids to forklift trucks, pick-and-place units and palletizers.

The throughput of this equipment runs from thousands per minute to scores per day. "We must manage a portfolio that includes a great variety of products," says Erik Willems, project engineer for mechanical engineering and internal automation. "The sales value of an order can be anything from a few thousand to a few million euros. We have a good reputation and a loyal customer base that operates internationally."

CAD with integrated PLM

Quality and delivery times are two critical elements in the purchase decision for this type of equipment. The price must also be attractive. With these competitive factors in mind, Verhoeven Oss Engineering Works decided to upgrade its engineering process.

"We used AutoCAD for a long time," Willems explains. "But it just wasn't working for us any longer. It had become clear over the years that 2D drawings could not be maintained and were difficult to revise, and that their re-use just wasn't happening. And that doesn't include the drafting errors that crept in unavoidably and created manufacturing problems. Moreover, machines have become more complex and could no longer be developed properly in 2D. Ultimately, 2D was costing us money."

Over time, Verhoeven Oss gradually acquired a number of different 3D computer-aided design (CAD) programs to meet local needs. Among these was Siemens PLM Software's Solid Edge® software, a powerful CAD solution for accelerated product design, faster revi-

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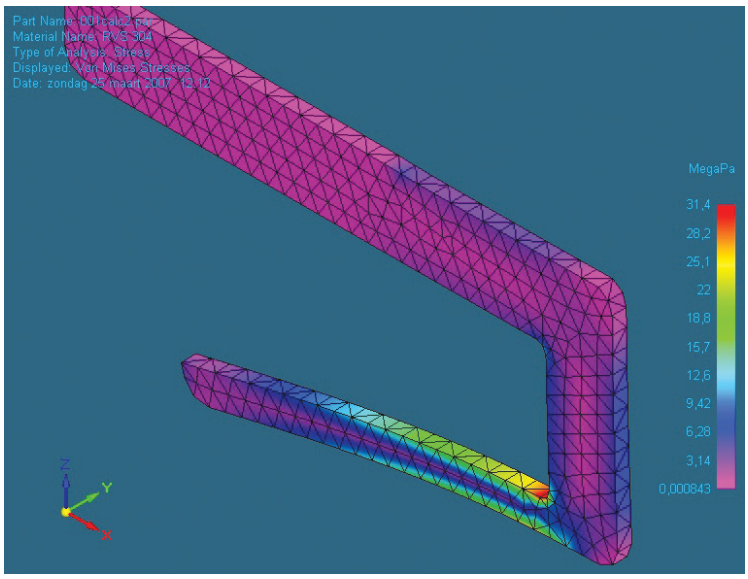
Erik Willems
Project Engineer
Verhoeven Oss BV
Engineering Works

sions and better data re-use. It was used for sheet metal design among other things. In 2007, the company decided to standardize on Solid Edge, along with Teamcenter® software, a product lifecycle management (PLM) solution preconfigured for rapid development and fast return on investment, also from Siemens PLM Software.

"The reason we opted for Solid Edge is that we also wanted a high-value data management infrastructure. Solid Edge is the only package for which the supplier can also provide a PLM solution that integrates perfectly with the CAD system. Moreover, the PLM system can be expanded in the future and links well with an ERP (enterprise resource planning) system," Willems says.

PLM supports staffing flexibility

Teamcenter was important because Verhoeven Oss' business model is organizational flexibility and the ability to deliver quickly. A considerable number of its 100 employees are multi-functional and can be deployed flexibly. When demand requires, additional staff can be taken on temporarily and a good deal of production contracted out.



"To make this kind of rapid response possible, we need to be able to repurpose more machinery, modules and components," Willems explains. "That means that we must be able to find designs when we need them, along with their full documentation, including production drawings and part lists. That was impossible with AutoCAD." AutoCAD® software drawings were moved into the database of Teamcenter, and the PLM system was introduced on a project-by-project basis.

"With Teamcenter, we know with certainty that we are working with the correct version of the design and the proper parts list. Moreover, we can now keep track of what a customer actually has, which ultimately benefits our after-sales business," Willems notes. In addition to engineering, the sheet metal production and purchasing departments are heavy users of Teamcenter. "The more people who use the data management infrastructure, the greater its value," he adds.

Since Verhoeven Oss contracts out some of its manufacturing, it is critically important that part lists and components be properly managed. Unlike in the past, everything is now maintained under version management using Teamcenter, making it possible to know precisely what items have been contracted out. This also means that Verhoeven Oss can provide 3D models so that the supplier does not need to convert drawings to models. That saves time and reduces errors.

Willems has great expectations for the linkage between Teamcenter and the ERP system. He explains: "It is still early to say anything definitive, but our experience to date with the new methodology gives me full confidence that the Teamcenter-ERP integration will make a considerable improvement to the hand-off between engineering and production. And that will yield improved delivery times."

Solutions/Services

Solid Edge
www.siemens.com/solidedge

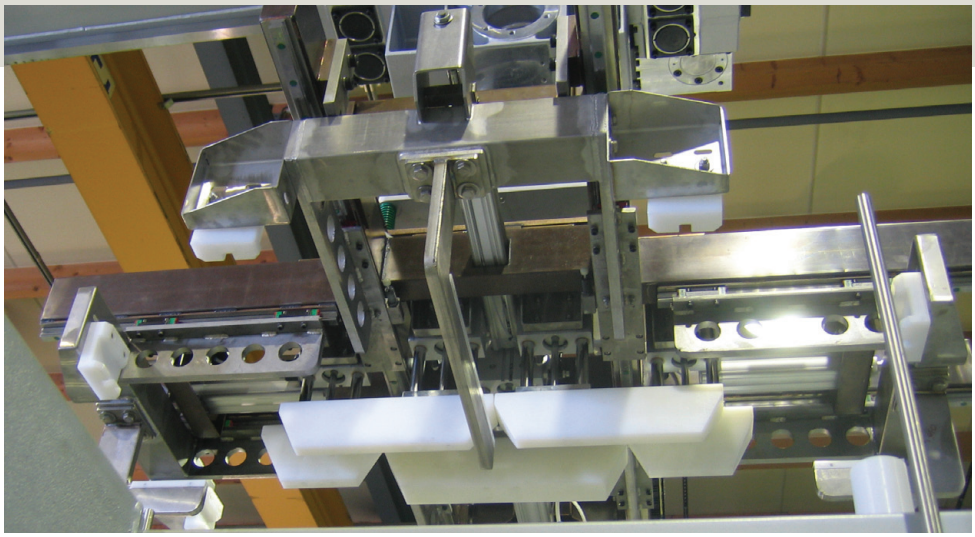
Teamcenter
www.siemens.com/teamcenter

Customer's primary business

Verhoeven Oss BV Engineering Works is an engineering and production center with specialized expertise in materials handling and conveyor technology.
www.verhoevenoss.nl

Customer location

Oss
The Netherlands



Better CAD = better machines

For Willems, one of the great advantages of Solid Edge is that its functionality is easy to use. And because engineers can complete more validations digitally, more functions can be added to the machines, resulting in added value to the customer. Another benefit of using Solid Edge is that design problems become apparent much earlier than they did previously and can be solved without incurring large expenses. Engineers regularly use finite element analysis (FEA) as well.

While Verhoeven Oss contracts out nearly all machining tasks, most of the sheet metal is produced in-house. With Solid Edge, sheet metal components now go into production without error. "We seldom hear of any production problems," Willems notes. "The benefits of Solid Edge for assembly are tremendous. And along with that, the machines now have a much more finished look and feel since the fit is perfect."

Drawings remain the most important source of information, both internally and externally. They are created nearly automatically from the 3D Solid Edge models using templates. Dimensions are attached to the drawings. For now, part lists are also attached to the drawings. "In the future, the part lists will move directly from Teamcenter to the ERP system," Willems explains.

Verhoeven Oss BV Engineering Works' goal of improving product quality and functionality while maintaining competitive delivery times has been achieved, says Willems. "Product quality has increased simply as a result of the tremendous improvement in the quality of the production documentation," he notes. "Production errors now are truly the exception. In addition, the machinery's operational aspects are guaranteed by the added functionality of Solid Edge and Teamcenter."

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