

# SIEMENS

*Ingenuity for life*

Energy and utilities

## Ferrolli

Ferrolli safeguards huge heritage of 3D parts and product designs and establishes innovation best practices using Siemens Digital Industries Software technology

### Products

NX, Teamcenter, Solid Edge

### Business challenges

Safeguard approximately 45,000 3D parts

Establish environment where multiple designers work concurrently on various projects

Cut product release cycle time

Handle increasing product complexity

### Keys to success

NX to edit 3D parts and product designs created with other software, supporting co-design and interaction with suppliers

Teamcenter to deploy concurrent engineering and define different boiler configurations quickly

### Results

100 percent recovery of design heritage, including all features and associated drawings

Engineers now focus on modeling instead of drafting

Time required to save models reduced from minutes to seconds

### Company achieves 100 percent recovery of design heritage

#### A successful combination of tradition and innovation

Ferrolli Group, founded by the current president and Knight of Labor Dante Ferrolli, is a leader in the field of heating and renewable energy products. Ferrolli Group was established in San Bonifacio (Verona, Italy) in 1955, following a big order for 500 natural gas boilers from the Municipality of Verona.

Today, the company has dramatically expanded its capabilities and market presence. Ferrolli utilizes multiple product groups (domestic and industrial heating, domestic and industrial conditioning, and renewable energy), twelve manufacturing sites and more than 3,000 employees to deliver its solutions worldwide.

To be a competitive as a key supplier in the global market, Ferrolli has adopted a flexible organization characterized by a focus on continuous innovation, international sales and production operations (more than two-thirds of its business is represented by export), strategic mid-term planning, and a motivated team aligned with the needs and wants of its internal and external customers.

#### New systems for increased productivity

The transition from 2D computer-aided design (CAD) to 3D modeling was made at



the end of the millennium, when Ferrolli discontinued use of its design software and replaced it with comprehensive design-through-manufacturing technology from product lifecycle management (PLM) specialist Siemens Digital Industries Software.

“Since the end of the ‘90s, we began to work exclusively in 3D, maintaining 2D for the design heritage accumulated over the years,” says Stefano Visonà, engineering

# “Today, it would be inconceivable for us to develop a project without Teamcenter.”

Stefano Visonà  
Engineering Department Manager  
Heating Division  
Ferrolì SpA

## Results (continued)

Significantly improved synergy in co-design and interaction with mold and die suppliers

via synchronous technology, resulting in substantially faster development cycle for complex products

Efficient lifecycle management of 1,700 products currently on the market

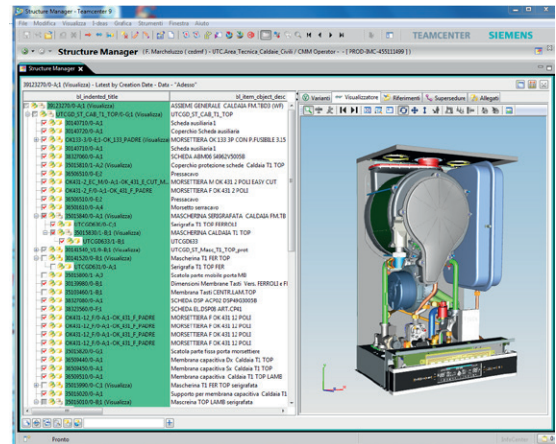


“The use of NX with synchronous technology has improved synergy in co-design and interaction with mold and die suppliers, helping us achieve significant goals in terms of improving release cycle time, especially in accelerating design turnaround for complex products.”

Francesco Marcheluzzo  
IT Service Engineer  
Ferrolì SpA

department manager of the Heating Division at Ferrolì. “We chose Siemens Digital Industries Software solutions from the very start, and today we have 15 NX licenses for residential boilers and about 20 Solid Edge licenses in other divisions. The adoption of NX was a turning point for us, after we had worked for several years with I-deas, accumulating approximately 45,000 parts in 3D. NX offered the opportunity of a big technology leap, but our heritage could not be wasted.”

Therefore, the migration was carried out very attentively and gradually, within the same “live” environment where designers continued to develop new products at an intensive pace. “In a period like this, when the enduring crisis in South Europe re-



quires strong commitment to innovation to conquer new markets, it is essential to develop new technology to be more competitive,” says Francesco Marcheluzzo, IT (information technology) service engineer at Ferrolì. “We took the opportunity to migrate from our old CAD system to NX, providing designers with excellent training at the same time. Our transition from I-deas to NX is a unique example of real migration. Very often, migration simply enables you to open parts and assemblies from other CAD software, while in this case, Siemens Digital Industries Software provided the tools to migrate all the features and associated drawings, with no additional costs.”

The use of NX™ software supported Ferrolì’s decision to standardize its product development environment in order to leverage its designs across divisions. “3D CAD is ideal for this type of approach,” notes Visonà.

# “With Teamcenter, Ferroli’s engineers can work with a real concurrent engineering approach.”

Francesco Marcheluzzo  
IT Service Engineer  
Ferroli SpA

“Especially after the recent upgrade of our hardware resources, we are appreciating how fast it is to reconfigure any product with NX. At the initial development stage of a totally new product, we can quickly conceive and combine several layouts, while working concurrently on a physical prototype for testing purposes. The speed and flexibility to handle 3D layouts have increased significantly with NX. Now, we can quickly check the feasibility of a project and make sure we are moving in the right direction.”

Marcheluzzo points to the importance of synchronous technology in realizing significantly improved interaction with its external suppliers of molds and dies for the production of boilers. “The use of NX with synchronous technology has improved synergy in co-design and interaction with mold and die suppliers, helping us achieve significant goals in terms of improving release cycle time, especially in accelerating design turnaround for complex products.”

## **Effective data management significantly bolsters operational efficiency**

Visonà notes that with NX, all designers at Ferroli, spending most of their time on 3D modeling rather than drawing or drafting, can rely on a very powerful tool; however, with 1,700 active products in the residential heating business, data management throughout the product lifecycle is a strategic factor. “Until 2007, our repository was a simple file system, with no database,” Visonà recalls. “So we decided to

implement Teamcenter from Siemens Digital Industries Software, starting to manage the I-deas archive and then quickly switching to NX. Teamcenter immediately proved to be essential to handling all modifications with no errors and, today, it would be inconceivable for us to develop a project without Teamcenter.”

All engineering department workstations running NX software are also equipped with Teamcenter® software. With Teamcenter, Ferroli’s engineers now utilize a streamlined concurrent engineering approach while, in the past, there was no parallel process in place and designers managed their own tasks independently. The change enabled by Teamcenter has been dramatic, serving as the foundation for digital best practices. Now, multiple people work on several projects concurrently, with all parts updated automatically in real time.

“Using Teamcenter, we have implemented an efficient management of revisions and design history, recovering 100 percent of existing designs with no pain,” says Marcheluzzo. “The solutions supplied by Siemens Digital Industries Software work at high speed. The time it takes to save a model, for instance, has dropped from a few minutes to few seconds. In general, we have shortened the cycle time to release increasingly complex products, such as the new Bluehelix line of condensing boilers, which feature a heat exchanger developed and patented by Ferroli.”



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Stefano Visonà  
Engineering Department  
Manager  
Heating Division  
Ferroli SpA

## Solutions/Services

NX

[siemens.com/nx](http://siemens.com/nx)

Teamcenter

[siemens.com/teamcenter](http://siemens.com/teamcenter)

Solid Edge

[solidedge.siemens.com](http://solidedge.siemens.com)

## Customer's primary business

Ferrolì SpA is a leader in domestic and commercial boilers and renewable energy products, offering a wide range of technically advanced, energy-efficient and dependable solutions.  
[www.ferrolì.it](http://www.ferrolì.it)

## Customer location

San Bonifacio, Verona  
Italy

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Francesco Marcheluzzo  
IT Service Engineer  
Ferrolì SpA



## Looking ahead

In 2013, the Ferrolì engineering department upgraded from Teamcenter Engineering to Teamcenter on the unified architecture. The next challenge is computer-aided engineering (CAE), an area in which Ferrolì plans to implement non-linear analysis and computational fluid dynamics (CFD) capabilities, as well as handle wiring with NX Schematics.

"I want to underline the support of our management to innovation and investments in a period of crisis," Visonà concludes. "Innovation is even more important in difficult periods and our company believes in and focuses on product, process and system innovation, utilizing tier-one tools and partners like Siemens Digital Industries Software."

*"The adoption of NX was a turning point for us..."*

Stefano Visonà  
Engineering Department Manager  
Heating Division  
Ferrolì SpA

## Siemens Digital Industries Software

Americas +1 314 264 8499  
Europe +44 (0) 1276 413200  
Asia-Pacific +852 2230 3333

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