

CASE STUDY: MANAGING MANUFACTURING DATA FOR HEAVY MACHINERY



About the Customer

The customer is a leading U.S. developer and manufacturer of compressed air solutions. A pioneer in air compressor technology, the company offers a complete line of compressed air system products including portable and stationary compressors and accompanying aftermarket equipment. With manufacturing facilities on three continents and a worldwide distribution network, the customer has established themselves as a global leader in the industry.

Project Summary

Leveraging Siemens Teamcenter, Engineering's Industries eXcellence team designed and implemented a complete PLM solution that united the customer's engineering, manufacturing and quality data, driving process improvements on the shop floor and across all departments and levels of the organization.

Project Activities

- » Led analysis phase in collaboration with customer to gather business, user and functional requirements of final solution
- » Provided Siemens Teamcenter system design focused on tying manufacturing and quality data to existing engineering content
- » Implemented complete solution for Bill of Process (BOP) management, digital validation, work instructions, time studies and animation capabilities
- » Deployed solution to deliver digital data to shop floor personnel and CNC machines

Business Drivers

- » Speed up new product development time with digital process planning and validation
- » Reduce rework with improved change control capabilities
- » Increase quality metrics for assembly areas
- » Reduce inventory and material-handling costs by promoting accuracy of part assignments to manufacturing work centers
- » Increase global manufacturing capabilities and flexibility by sharing manufacturing process plans and data with other facilities

More About The Project

For this project, Engineering's team of specialists completed the analysis phase of a comprehensive Siemens Teamcenter Manufacturing implementation for the customer. In our first engagement with the customer, a manufacturer of Heavy Machinery, our consultants designed and developed an integrated PLM solution to manage all of their engineering and manufacturing data. Ultimately, the aim of the final solution is to unite both the customer's manufacturing data and their engineering data into the same system, as a result driving improvements within not only their manufacturing engineering group, but across their design engineering, quality, operations, service, supply chain and inventory departments as well, not to mention on the shop floor itself. Engineering's approach to requirements gathering is always to get our customer hands on with the new software from day one. Throughout our analysis for this project, our experts and the customer's end users worked directly with the Siemens Teamcenter Manufacturing products in scope in order to gather the business requirements, user requirements and functional requirements of the final solution. This approach enhanced the requirements gathering process by allowing project stakeholders to understand the future system in the context of their own unique business and manufacturing processes. The result of the analysis phase was a complete system design for the customer, which included and integrated:

- » Teamcenter Manufacturing Process Planner (MPP), used to create the manufacturing Bill of Process (BoP), with digital BoP validation and process work instructions attached directly to the BoP.
- » Cortona3D with integration to Teamcenter Manufacturing, used to create 3D animations of the assembly process, attached directly to the Bill of Process.

» Teamcenter Manufacturing Electronic Work Instructions (EWI) to deliver digital work instructions directly from the Teamcenter BoP to the operators on the shop floor.

» The new system design also encompasses the customer's CNC machining division, which will receive cutting-edge parts manufacturing solutions from Siemens, including NX CAM and Shop Floor Connect (SFC) for Teamcenter.

Engineering's Advantage

Proud to have one of the most extensive backgrounds working with and delivering the entire Siemens IT offering for Digital Manufacturing, Engineering is one of Siemens' longest-standing system integration partners in the world, and the only company in partnered with 3 of the software giant's divisions. In terms of technology, Product Lifecycle Management (PLM) is undoubtedly one of our strongest areas of experience and expertise. While most companies see Siemens Teamcenter Manufacturing (and PLM in general) as a tool to manage engineering data alone, Engineering focuses on PLM to bridge the gap between engineering and production as it relates to manufacturing.

Thanks to our continuous investment in expanding how we leverage the Siemens Teamcenter Manufacturing offering for our customers and the manufacturing industry, our consultants' unmatched knowledge of and experience working with the product firsthand, as well as our practice's end-to-end expertise and capabilities, the result of this initiative for the customer was a comprehensive PLM solution that will continue to drive unparalleled efficiency across their manufacturing data management processes, from top floor to shop floor, for years to come.

Would you like to learn more about this customer case study? Contact us at info@engusa.com.

ENGINEERING Industries eXcellence Global

Industries eXcellence is a division of the Engineering Group, a global software maker, system integrator and provider of innovative technology solutions and services. Our division specializes in the digital transformation of the manufacturing and transportation sectors. We design, build and implement solutions that drive process automation, operational efficiency, supply chain optimization and intelligent data analytics for leading industrial enterprises worldwide.

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