



CASE STUDY

NOV Fiber Glass Systems implements Octave Forte Isometrics for production of fiberglass-composite pipes



Key facts:

Company: NOV Fiber Glass Systems

Website:
www.nov.com

Industry: Process

Country: United States

Octave products used:
Forte Isometrics
(Intergraph
Smart Isometrics)

Key benefits:

- Reduced time in spooling and material take-off (MTO) preparation
- Reduced errors for increased MTO accuracy
- Improved productivity through automation and reduced manual editing
- Rapid and easy creation of company-standard fiberglass piping component database

Identifying goals

National Oilwell Varco (NOV) acquired Ameron International Corporation in 2011, creating NOV Fiber Glass Systems (FGS). NOV FGS manufactures and markets the world's most comprehensive line of fiberglass pipe products for the chemical and industrial markets. They are used for oilfield, service station fuel handling, offshore platform and marine applications.

NOV FGS had previously used plain 2D Autodesk AutoCAD® to create fabrication spool drawings. This process is both time-consuming and error-prone, leading to shortages of materials during procurement, as well as dimensional errors during manufacturing.

With the growth in business, NOV FGS wanted to boost efficiency of its production, as well as ensure it could effectively handle future growth. The company also sought to increase accuracy of material take-off (MTO), which will help to facilitate the production process.

Overcoming challenges

- Establish database-driven spool drawings
- Improve productivity
- Reduce manual editing during drafting
- Minimize errors and produce accurate MTO

Realizing results

NOV FGS wanted a standalone solution that is easy to use and would produce accurate results. The company chose Forte Isometrics because it was the only software solution available in the market that met these key requirements. In addition, the solution is user-friendly, so only minimal training was required. NOV FGS can also customize Forte Isometrics as required because the solution is very flexible.



NOV FGS manufactures piping products used for oilfield, service station fuel handling, offshore platform and marine applications

Forte Isometrics, powered by Forte Isogen (formerly Smart Isogen), is the Octave solution designed to document piping systems with industry-standard piping isometric drawings, and is ideal for site-based piping engineers and designers. Forte Isometrics can read design isometrics from almost any 3D plant design system or create new isometrics quickly and accurately from sketches, providing a high-quality record for planning, cost estimation, inspection or design of modifications.

NOV FGS implemented Forte Isometrics to generate database spools with accurate and automated MTO. The draftsmen use the Octave solution to develop spool drawings for production from NOV FGS client's isometrics or layouts. The generated MTO is then sent to the sales and production team for planning and preparation.

It was a smooth and easy process for NOV FGS to implement Forte Isometrics and users became proficient in the software very quickly. The solution could be readily adapted to suit the company's work processes and its ability to provide accurate piping reports delivered great benefits to the handover of information between business departments by ensuring that accurate and timely procurement of materials is always performed. Due to the extensive customization options available in Forte Isometrics, symbols and drawing templates could be established to enable standardized, consistently presented and industry-standard isometric deliverables to be produced for all projects that NOV FGS undertakes.

Forte Isometrics has also delivered significant time savings to NOV FGS. With its previous methods, it might have taken approximately one hour to create each individual spool drawing, including the addition of attribution, cutting and MTO information and jointing details between male and female parts. Due to the productive pipe-sketching functionality and powerful editing tools of Forte Isometrics, as well as the inclusion of Forte Isogen drawing automation, revising piping designs is fast and easy. Using the Octave solution, NOV FGS has dramatically reduced design time and errors, with drawing production time per spool drawing now reduced to just minutes. NOV FGS considers all drawings and MTOs produced by Smart Isometrics to be 99% accurate.

NOV FGS is very satisfied with the implementation of Forte Isometrics, which has enhanced the company's accuracy and productivity. With Forte Isometrics, NOV FGS can generate 25 to 30 spools per day, complete with MTO and ready for production.

Moving forward

NOV FGS currently has a few thousand items in its database but expects this number to keep growing as it takes on more projects. The company will continue enhancing its system and processes to keep up with business growth, and ensure it fully maximizes the benefit of Forte Isometrics for significant time and costs savings while maintaining high-quality production of fiberglass-composite pipes.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property, and assets— for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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