



## NOV FIBER GLASS SYSTEMS, U.S.

### Key Facts

**Company:** NOV Fiber Glass Systems

**Website:** [www.nov.com](http://www.nov.com)

**Industry:** Process

**Country:** U.S.

### Products Used:

- 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

## NOV FGS IMPLEMENTS INTERGRAPH SMART® ISOMETRICS FOR PRODUCTION OF FIBERGLASS-COMPOSITE PIPES

### 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
- Reduce manual editing during drafting
- Improve productivity
- 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 Intergraph Smart® 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 could also customize Smart Isometrics as required because the solution is very flexible.

Smart Isometrics, powered by Isogen®, is the Hexagon PPM solution designed to document piping systems with industry-standard piping isometric drawings, and is ideal for site-based piping engineers and designers. Smart 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 Smart Isometrics to generate database spools with accurate and automated MTO. The draftsmen use the Intergraph 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 Smart 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 Smart 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.

Smart Isometrics has also delivered significant time savings to NOV FGS. With its previous methods, it might have taken

approximately one hour to create each and every 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 Smart Isometrics, as well as the inclusion of Isogen drawing automation, making revisions to piping designs is fast and easy. Using the Hexagon PPM 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 percent accurate.

NOV FGS is very satisfied with the implementation of Smart Isometrics, which has enhanced the company's accuracy and productivity. With Smart Isometrics, NOV FGS is able to 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 Smart Isometrics for significant time and costs savings while maintaining high-quality production of fiberglass-composite pipes.

## ABOUT HEXAGON

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create smart digital realities that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.5bn EUR. Learn more at [hexagon.com](http://hexagon.com) and follow us @HexagonAB.