

## Ford, Bacon & Davis LLC, United States

### Key Facts

**Company:** Ford, Bacon & Davis, LLC

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

**Industry:** Construction, Gas, Petrochemical

**Country:** United States

### Products Used:

- CAESAR II®
- PV Elite®

### Ford, Bacon & Davis Foster Training and Knowledge with CAESAR II® and PV Elite®

Headquartered in Baton Rouge, La., Ford, Bacon & Davis LLC provides full-service engineering, procurement, project management and construction management to leading names in energy and manufacturing. Since its beginnings in 1973, the company has grown to 700 employees with five offices across the Gulf South region of the United States. Engineering analysis can involve newly designed systems with rotating equipment, piping, and vessels. Projects with 2- to 12-inch diameter pipes at medium to high temperatures are common. Some may require only 15 or fewer calculations for 100 feet of pipe while others involved complex calculations for thousands of feet of piping.

### Facing Complex Tasks with Little Experience

Recent engineering graduates with book knowledge often lack on-the-job practical experience. Thrown into the workforce, they often look to their more experienced peers to learn best practices for stress analysis. Learning complicated, less than user-friendly analysis software can make the challenge even harder. This hampers productivity and can produce subpar outcomes and inferior installations. Failing to calculate and apply the correct standards on a project can put worker safety at risk during the construction phase and reduce operating performance and length of service of the piping systems.

### Conveying Technical Results

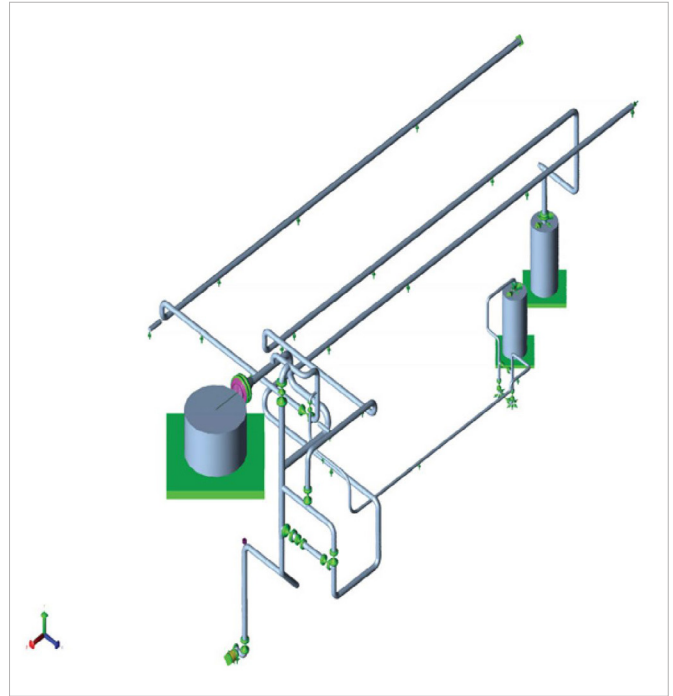
It can be challenging for engineers to communicate technical calculations to clients that come from non-technical backgrounds because complex stress analysis calculation results as just numbers can be difficult to understand. Also, numbers and formulae alone on paper may not convey the importance of accurate stress analysis.

## Leveraging CAESAR II and PV Elite for Easier Analysis and Better Results

To address these issues, Ford, Bacon & Davis chose Intergraph CAESAR II and PV Elite as its tools for analyzing pipe and vessel stresses and producing stress isometrics and restraint summaries. CAESAR II's artificial intelligence gives entry-level and even more experienced engineers access to key knowledge while they gain experience. The software walks them through each step of the process to ensure accurate calculations and designs to standard. "Without a program as easy to use and understand as CAESAR II, the stress engineering would take substantially longer and would be more difficult to present to our clients," said Jared Altazan, Stress Analyst at Ford, Bacon & Davis.

## Delivering Value for All Project Collaborators

CAESAR II's color-coded stress visual and animated displacement model make it easy to show the contrast between a well-designed and poorly designed piping system. The output format is easy for a client to understand because it shows how various influences affect the piping and provides a visual representation of all of the stresses. "CAESAR II brings an important visual aspect to stress analysis because it transforms a complex engineering science with numerous numbers, formulae and calculations into an easily understood visual representation," Altazan said. "Approvals are fast, and the client is pleased with results."



## About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, 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 21,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us @HexagonAB.