

## FACTS AT A GLANCE

**Company:** Petrovietnam Marine Shipyard

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

**Description:** Petrovietnam Marine Shipyard was established in 2007 with a goal of implementing the policy of the Vietnamese government to develop the manufacturing of oil and gas drilling rigs in Vietnam. PV Shipyard specializes in the construction, conversion, and repair of diversified types of mobile drilling units and facilities, including a wide range of complex offshore structures. With the aim of creating technical solutions with international standards, and completing projects of high quality at a competitive price, PV Shipyard expects the Vietnamese mechanical manufacturing field to reach a higher position with the industrialization and modernization of the Party and State in the near future.

**Industry:** Offshore

**Country:** Vietnam

## PRODUCTS USED

- SmartMarine® 3D

## KEY BENEFITS

- Fast implementation
- Improved engineering productivity, and optimized design accuracy and quality
- Reduced project timelines by 50%
- Significant cost savings

## PV SHIPYARD STANDARDIZES ON INTERGRAPH® SMARTMARINE® 3D FOR OFFSHORE PROJECTS

**Next-generation 3D solution delivers significant time and cost savings with improved design quality**

### IDENTIFYING GOALS

Petrovietnam Marine Shipyard (PV Shipyard) is based in Vung Tau City, Vietnam, and it specializes in construction, conversion, and repair of diversified types of mobile offshore drilling units and marine facilities. The shipyard was established in 2007 to meet the growing demands of the offshore oil and gas industry in Vietnam and the region.

As a growing company, PV Shipyard faced the challenging mission of developing capabilities to design and build offshore facilities such as jack-up rigs, as well as acquiring the necessary skills to support its operations. The company has ambitious plans and strives to be the preferred contractor for offshore jack-up projects in Vietnam. It was highly critical that PV Shipyard proved its capabilities and made a mark in the industry in order to establish itself as the premier design and construction company in Vietnam for offshore facilities.

In 2009, only two years after its establishment, the shipyard was awarded its first project to design, build, and deliver a 90-meter LeTourneau Super 116E jack-up rig. PV Shipyard needed to implement next-generation engineering technology to ensure quality, accuracy, and automated processes in producing the deliverables required for this project and all future projects. This is aligned with the company's long-term goal of taking on global projects.

### OVERCOMING CHALLENGES

- Establish engineering technology standard to develop capabilities for the design and construction of offshore facilities
- Generate accurate, high-quality deliverables through automated processes
- Ensure its young team of engineers is fully trained in next-generation technology and supported throughout the project

### REALIZING RESULTS

After an intensive evaluation of all the solution providers in the market, PV Shipyard chose Intergraph® and the SmartMarine® 3D solution to design and build its first jack-up rig, with local distributor support from Credent Technology, Intergraph's

partner in Vietnam.

“As a young and dynamic company, we needed a reliable and proven vendor that could support our goals as we drive our business and establish ourselves in the market,” said Phan Tu Giang, managing director of PV Shipyard. “We are very impressed with SmartMarine 3D’s rule-based, automated technology, which is the perfect match for our requirements.”

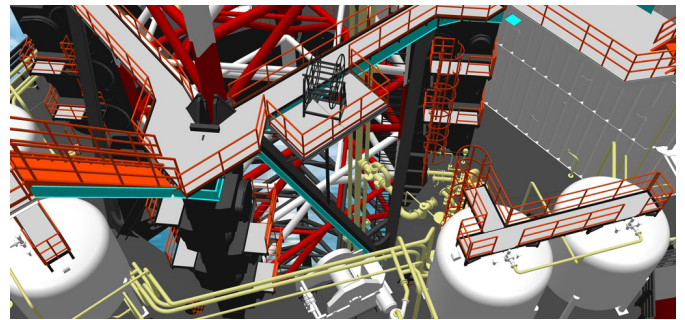
SmartMarine 3D is the world’s most advanced offshore and shipbuilding design solution, featuring breakthrough engineering technology that is data-centric, knowledge- and rule-driven to improve delivery schedules, with increased detail and manufacturing design productivity of up to 30 percent. SmartMarine 3D provides PV Shipyard with the capabilities it needs to gain and maintain an edge in a highly competitive industry by improving safety, increasing quality, and boosting productivity.

PV Shipyard purchased SmartMarine 3D for its group of young engineers, most of whom had just graduated from university. Intergraph and Credent fully supported PV Shipyard’s training program, providing in-depth training and giving them the opportunity to use the application on a pilot project before implementing SmartMarine 3D for the jack-up rig project.

“Intergraph was very committed in helping us, providing PV Shipyard with dedicated local support through Credent,” said Phan Thanh Son, engineering manager at PV Shipyard. “Intergraph also has extensive industry experience, providing us with great advice, which we appreciate very much. It is clear that we made the best choice when choosing Intergraph and Credent as our technology partners.”

Within six months, PV Shipyard moved into production, utilizing SmartMarine 3D for detail design and modeling of the jack-up rig. The implementation of SmartMarine 3D was a tremendous success for PV Shipyard. The company was able to complete the design of the jack-up rig on time and within budget, and it is on track to deliver the rig within the planned schedule.

“We are the first company in Vietnam to use 3D technology to design and model jack-up rigs, and it has been very successful for us,” said Phan Thanh Son. “SmartMarine 3D reduced the time involved in the project by 50 percent, bringing down costs significantly, while improving the quality of design and delivery.”



Topside view of 90-meter jack-up drilling rig

## MOVING FORWARD

Today, SmartMarine 3D is the 3D engineering and design solution of choice for PV Shipyard, and the Intergraph solution is used for all its offshore projects. PV Shipyard was also a 2010 Golden Valve award winner with its SmartMarine 3D model in the Judges' Choice Offshore category.

The company has also expanded its use of Intergraph technology by selecting other solutions from the comprehensive SmartMarine Enterprise suite, including SmartPlant® Foundation, SmartPlant Instrumentation, SmartPlant P&ID, SmartPlant Electrical, SmartPlant Reference Data, and SmartPlant Review. PV Shipyard will use these solutions in an integrated environment for the design, construction, production, and planning of offshore facilities for improved efficiency and quality.

“We are preparing for our next major project and the implementation of an integrated suite of SmartMarine Enterprise solutions will enable us to meet our productivity requirements,” said Phan Tu Giang. “We are confident we will gain even more business benefits, and the Intergraph solutions will prove to be invaluable to us at PV Shipyard.”

## ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph’s industry-specific software to organize vast amounts of data to make processes and infrastructure better, safer, and smarter. The company’s software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction,

operation, and data management of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the public safety and security, defense and intelligence, government, transportation, photogrammetry, and utilities and communications industries. Intergraph Government Solutions (IGS) is an independent subsidiary for SG&I’s U.S. federal and classified business.

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