



Det Norske Veritas, Norway

Key Facts:

Company: Det Norske Veritas

Website: www.dnvgl.com

Industry: Oil & Gas - Offshore

Country: Norway

Products Used: PV Elite®

Det Norske Veritas Succeeds with PV Elite® Vessel Modeling and Design Review

Headquartered in Oslo, Norway, and with 9,000 employees and 300 offices in nearly 90 countries, Det Norske Veritas (DNV) is an International Association of Classification Societies organization and one of the world's largest providers of risk management services to the maritime, energy, food and beverage and healthcare industries. In Brazil, DNV has completed a number of projects for oil major Petrobras and is the country's leading management systems certification body. The company has also been active in Brazil's shipbuilding industry.

Certifying vessels for Brazilian TEG project

DNV has been providing Brazilian companies with gap analysis and technical safety studies to align their safety management systems to meet new code requirements. One project was a 300 million triethylene glycol (TEG) facility with 30 pressure vessels that were part of the floating production storage and offloading (FPSO) units for two Brazilian shipyards under construction. The project involved converting the old vessel hull into a FPSO hull. The P-58 shipyard is in Pernambuco in the northeast, and the P-62 shipyard is at Rio Grande do Sul in southern Brazil. DNV's task was to provide design review and approval and certification of all equipment according to the facility's classification requirements.

Meeting tight schedules while working on simultaneous projects

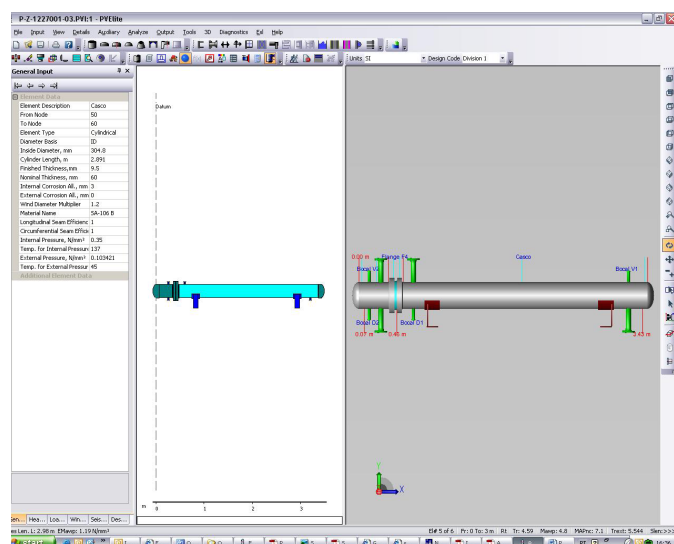
Two major challenges on this project were meeting the tight project schedules and working on the two facilities simultaneously. Based on DNV's past successes with PV Elite, it decided the software was right for this project. Using manufacturer drawings and calculations, DNV modeled the vessels in PV Elite and then used PV Elite to analyze the equipment according to the ASME VIII Division 1 code. DNV performed quality system management audits, welding production tests, visual and dimensional inspections and monitored hydrostatic tests, and its technicians attended all specified verification points during the fabrication.

Developing accurate design and survey verification reports with PV Elite

“PV Elite provided accurate design review data necessary which helped us develop reliable and consistent surveyor and approval reports,” explained Rafael Silva, mechanical engineer at DNV Brazil. DNV was able to identify mistakes in the manufacturer’s models and issue precise comments to address them. “Because the manufacturer had also used PV Elite for its calculations, we were able to deliver a more comprehensive analysis,” Silva added.

Eliminating inconsistencies and delays

PV Elite helped eliminate inconsistencies and avoid delays. “We saw faster design reviews which allowed us to communicate our results to surveyors immediately and follow up with the manufacturer, avoiding costly rework due to vessels being built with designs out of compliance with project code,” Silva said. PV Elite allowed DNV to perform not only an independent and professional analysis of pressure vessel designs but also ensure the designs met all the technical safety requirements. “Our manufacturer and client were confident with the design approval process and PV Elite’s efficiency and reliability in providing clear reporting and accurate 3D models for fabrication,” Silva said.



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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.

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