

Bureau Veritas, Naval Group and Dassault Systèmes Deliver First 3D Classification Process for a Significant Vessel Project

- Collaborative project uses 3DEXPERIENCE platform to create 3D model of new Naval Group frigate
- Digital continuity and real-time collaborative 3D design review integrates ship design and classification verification, eliminating need for 2D drawings
- 3D classification process marks a concrete step in the digital transformation of the maritime business

Paris-La Défense, France, November 06, 2018 -- Bureau Veritas, Naval Group and Dassault Systèmes announced today that a 3D classification process has been applied to a significant naval vessel for the first time. This marks a major step forward in the design review and calculation modelling required for class approvals in the design and construction of new ships, as well as in the digital transformation of the marine industry.

The collaborative project to develop the concept of 3D classification combines the expertise of Bureau Veritas in testing, inspection and certification; of Naval Group in the design and construction of high technology military vessels; and of Dassault Systèmes in 3D design software, 3D digital mock up and product lifecycle management solutions. Together, the project partners aimed at enabling digital continuity to reduce the time and associated costs spent in design review, and to improve data accuracy and traceability by sharing information more effectively between different project stakeholders.

The 3D classification process was developed with Dassault Systèmes' 3DEXPERIENCE platform. It uses a single 3D model to enable the exchange of digital information, improve collaboration, and reduce the number of iterations necessary in the classification design review process for approving a design. All comments and iterations can be tracked, acted upon, and reviewed in real time.

The 3D model integrates completely with the Bureau Veritas suite of modelling and calculation software tools. Bureau Veritas can deliver the classification based on the 3D model of the vessel, and Naval Group can ultimately increase the capability of its products and improve its competitiveness through more innovative processes.

Matthieu de Tugny, COO, Bureau Veritas, Marine & Offshore said, "Design review is a very important phase in the process of classification. 3D classification means no more reliance on 2D drawings in the design review process. This will deliver a practical, shared and scalable model to demonstrate the advantages of the digital transformation in the Marine Industry. In a rapidly changing landscape this provides us and our stakeholders with the tools to provide a modern classification service establishing a new 'State of the Art' process for classification."

Olivier de la Bourdonnaye, Naval Group, Senior Vice-President Industry, explained that, "As the European leader in the naval industry, Naval Group designs, manufactures and maintains surface vessels and submarines for its customers. Our main challenge today is to increase the capability of our products and, in the meantime, to improve our competitiveness. To meet our business challenges, innovation is at the heart of our strategy. Innovation in product, but also innovation in processes. 3D classification will be one of these innovations in our processes. It will help us decrease our cost of engineering and also improve the lead time of our developments."

"Today's shipbuilders must deliver larger, more sophisticated vessels in order to stay competitive in the industry. 3D model-based classification offers a strategic advantage for meeting business challenges in

quality, costs, lead time and engineering,” said Alain Houard, Vice President, Marine & Offshore Industry, Dassault Systèmes. “Our collaboration with Bureau Veritas and Naval Group echoes our long-term commitment to deliver new digital capabilities for innovation to transform established processes. With the 3DEXPERIENCE platform, organizations can collectively capture, share, and build knowledge, and orchestrate their know-how.”

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Link to the video “Bureau Veritas & Naval Group pioneering 3D naval classification”:

<https://www.3ds.com/customer-stories/single/bureau-veritas-naval-group/>

About Bureau Veritas

Bureau Veritas is a world leader in laboratory testing, inspection and certification services. Created in 1828, the Group has around 74,000 employees in more than 1,400 offices and laboratories located all across the globe. Bureau Veritas helps its clients to improve their performance by offering services and innovative solutions in order to ensure that their assets, products, infrastructure and processes meet standards and regulations in terms of quality, health and safety, environmental protection and social responsibility. Bureau Veritas is listed on Euronext Paris and belongs to the Next 20 index. Compartment A, ISIN code FR 0006174348, stock symbol: BVI.

Corporate website: www.bureauveritas.com/marine-and-offshore Marine client portal: www.veristar.com

About Naval Group

Naval Group is a European leader in naval defence. As an international high-tech company, Naval Group uses its extraordinary know-how, unique industrial resources and capacity to arrange innovative strategic partnerships to meet its customers’ requirements. The group designs, builds and supports submarines and surface ships. It also supplies services to shipyards and naval bases. Attentive to corporate social responsibility, Naval Group adheres to the United Nations Global Compact. The group reports revenues of €3.7 billion and has a workforce of 13,429 (data for 2017). www.naval-group.com

About Dassault Systèmes

Dassault Systèmes, the 3DEXPERIENCE Company, provides business and people with virtual universes to imagine sustainable innovations. Its world-leading solutions transform the way products are designed, produced, and supported. Dassault Systèmes’ collaborative solutions foster social innovation, expanding possibilities for the virtual world to improve the real world. The group brings value to over 220, 000 customers of all sizes, in all industries, in more than 140 countries. For more information, visit www.3ds.com

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