

GOLTENS' ENGINEERING SERVICES GO FAR BEYOND BALLAST WATER AND SCRUBBER RETROFIT SERVICES

WIND-ASSISTED GREEN CARGO VESSEL *MV CANOPÉE*

Jifmar Guyana, a marine contractor with headquarters in Aix-en-Provence, France, developed a wind-assisted RO-RO cargo vessel for the Ariane Group to transport its Ariane 6 rocket parts from Europe to Guyana. The 121-meter, 4,700-dwt vessel *Canopée* is designed and built by Neptune Marine Projects in Leek, Netherlands.

MAJOR PROJECT CONTRIBUTOR

Goltens' design team was honored to be a part of the design team for this unique and groundbreaking vessel, the very first cargo vessel equipped with four wingsails called OceanWings®. The OceanWings® system will enable the vessel to significantly reduce its fuel consumption. Goltens' scope included the mechanical engineering and part of the outfitting of the technical spaces, routing of all ship's pipelines, and delivery of the equipment and appendages.

DESIGN PROCESS MAXIMIZES YARD OPERATIONS AND CONSTRUCTION EFFICIENCY

Through close coordination with the owner and the shipyard, Goltens created 3D Cadmatic models for the technical spaces, including the propulsion and alignment arrangement. Our focus was on delivering a practical layout optimized for efficient daily operations and maintenance of the systems. Using 3D software and the accompanying viewer made full oversight of the actual arrangement, service space, walking areas, etc., much easier for the owner and the shipyard.

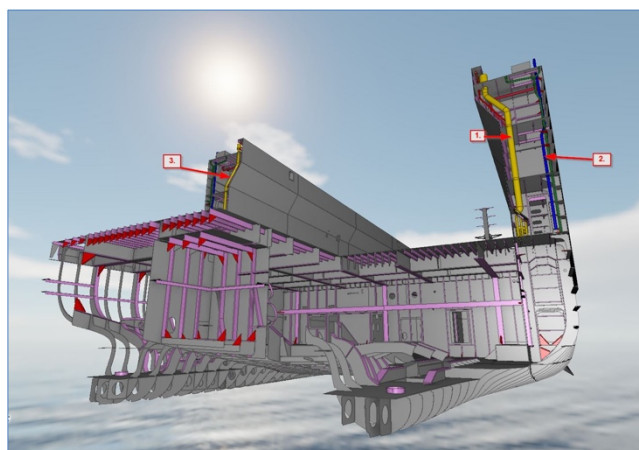
The technical systems packages included complete diagrams with parts lists and relevant calculations for systems capacities. Foundation drawings were made for the delivered equipment. Furthermore, the delivered designs optimized the routing of the lines for low-cost production and piping installation. Performing the piping and construction engineering at the same time saved significant time at the yard as installation was simplified by cutting penetration holes beforehand instead of doing this on site. All Class approvals and communication were handled by Goltens, with the vessel scheduled for final delivery to the owner by the end of 2022.

PROJECT FACTS:

Ship Type:	MV Canopée Newbuild
Location:	Wind Assisted Ro-Ro Cargo
Vessel Length:	Szczecin, Poland
Displacement:	121-meter
Wingsail Design:	4,700 DWT
	OceanWings®



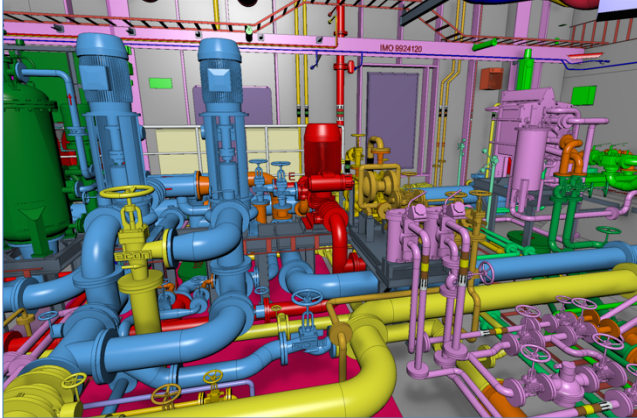
Rendering of Wind-Assisted Green Cargo Vessel *MV Canopée*



3D model showing optimized pipe routing for most efficient and easy installation with long pipe lengths, shown as on the photo below



MV Canopée during shipyard construction in Szczecin, Poland



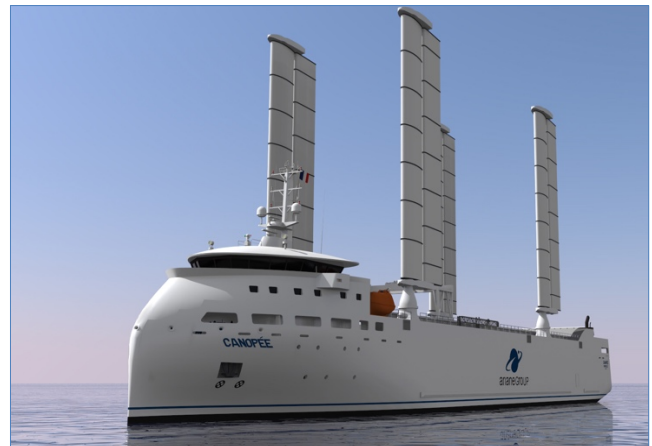
3D model of the engine-room design



Engine room during installation



Under construction at the yard in Szczecin, Poland (April 2022)



Rendering of the vessel design

GOLTENS' SCOPE OF DELIVERY INCLUDED:

- 18 P&IDs with part lists
- 86 different pieces of equipment
- 1,069 appendages
- Routing of 4,200-meter pipelines
- Approximately 3,500 isometric drawings of the individual pipe spools
- 30 arrangement drawings
- 165 outfitting section, tank arrangement & system drawings
- 64 foundation drawings