

Blue INNOship

Project name:

Trailer Cat

Project participants:

Bureau Veritas

CBS

DBI

DTU

MacGregor

OSK-ShipTech A/S

Tetraplan

Transmar

Claus Kruse, Project Manager

Short project description

1. The Trailer Cat-project introduces a new concept of a Ro-Ro (Roll-on-Roll-off) vessel designed as a catamaran configuration intended for large volume maritime transport of road trailers and other classes of rolling cargo.
2. The goal is to confirm the objective of achieving a cost reduction of 50 % per trailer and a CO2 emission reduction of 70 % per trailer compared to large conventional vessels in use today on a route of approx. 120 nautical miles. At least two potential services for the concept to be identified and assessed.
3. The intention is to further develop a business case that will enable an operator and/or investor to start negotiations with partners as well as with customers, ports, shipyards and authorities.

Technology Readiness Level								
1	2	3	4	5	6	7	8	9
			X					

Key features & findings

What key features or findings would you like to highlight from your project work until now?

1. The technical viability has been confirmed for establishment of terminals as well as access to the selected potential ports.
2. There is a market on the investigated potential routes for the required big cargo volumes.
3. A preliminary analysis of wave loads on the hull and strength of the global hull structure indicates that the global strength is not as challenging as first expected.
4. A state of the art CFD optimisation of the hull form has been conducted, minimising the propulsion resistance.

Project challenges and solutions

What challenges have the project team experienced and how has the team solved them?

- + The width and size of the vessel is a challenge for the ports.
This has been analysed in a dialogue with the potential ports.
- + Are the cargo volumes on the identified potential routes sufficient for a vessel of that size?
Which modifications are necessary to adjust to the market?
Focus on potential development of and impact possibilities on the market.
- + Due to the unusual design, the design criteria for the structure are not defined and have to be estimated in cooperation between Bureau Veritas and OSK-ShipTech A/S.
- + The steel weight of the vessel is of significant importance for the price of the vessel, the fuel consumption – and consequently the project. Focus on light designs.
- + The wave interference between the hulls has a negative impact on the resistance and it is minimised by CFD analysis of the hull form
- + The assumed fast turnaround time in ports has to be confirmed.
Simulations of loading and discharging have to be carried out.
Bottlenecks to be identified and eliminated.
Initial design of mooring system to be developed.
- + Lashing of the trailers has to be avoided, and the extent of the challenge has to be identified.
- + Minimising of the required terminal areas ashore.
Analysis of available knowledge and simulations of logistics.

Why should you buy our solution?

What makes your solution the preferable one compared to other available solutions?

Because the solution will result in a significant reduction of the cost per transported trailer – and in addition a significant reduction of the environmental impact.