



CASE STUDY VESSELS



- ✓ Ship Type: *Bulk Carrier*
- ✓ L_{pp}: 225.5 m
- ✓ Summer Load Line: 14.45 m
- ✓ Owner: *Laskaridis Shipping Company Ltd.*



- ✓ Ship Type: *RoRo*
- ✓ L_{pp}: 190 m
- ✓ Summer Load Line: 7.50 m
- ✓ Owner: *Grimaldi Group*

The two selected vessels are being utilized in the **RETROFIT55** project to assess the effectiveness of innovative technologies in achieving a 55% reduction in GHG emissions. The project also serves as a showcase, presenting concrete examples and case studies of retrofitting solutions that can be implemented today with minimal impact on the ship's operating schedule.

Partners

Inside this Issue:



- ✓ Case study vessels
- ✓ Application of the developed retrofitting solutions

Website: <https://www.retrofit55.eu>

Read more about:

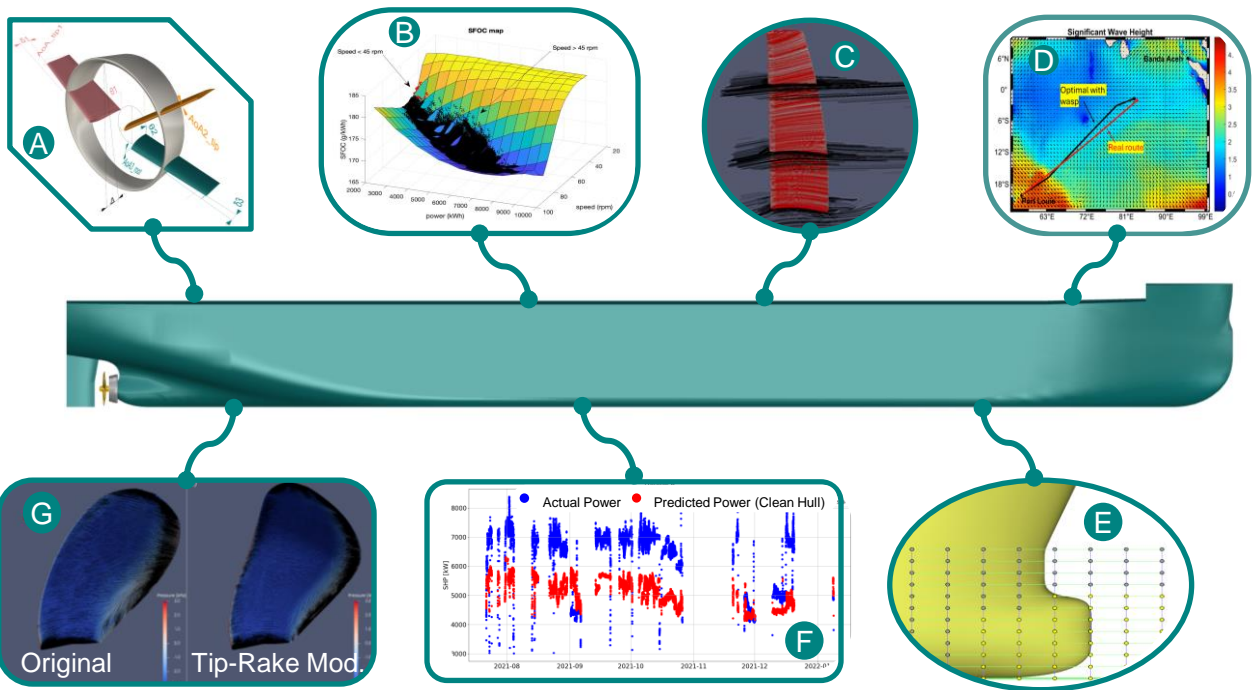
- ✓ The project [here](#)
- ✓ The partners [here](#)

Check EU CORDIS factsheet published in [here](#)



TECHNOLOGY DEMONSTRATION DEVELOPED BY THE CONSORTIUM MEMBERS FOR THE SELECTED VESSELS

In the RETROFIT55 consortium, shipping operators provide data such as drawings, SCADA data, and noon reports to support the evaluation of retrofitting technologies. Efficiency is assessed on two vessel types: a bulk carrier and a Ro-Ro, representing distinct categories — low-speed cargo ships and faster, slender vessels. The findings aim to apply broadly across various ship types. The project’s goal is to develop an advanced web-based Decision Support System (DSS) that integrates digital twins into a unified digital ship model.



- A. Energy Saving Devices** to improve propulsion efficiency
- B. Use PTO/PTI system** to minimize M/E fuel consumption
- C. WASP aerodynamic modelling** to derive the overall ship dynamic model
- D. Weather routing optimization** is essential for WASP equipped vessels
- E. Bow retrofitting** to optimize hydrodynamic performance
- F. Hull and propeller monitoring** to efficiently perform maintenance events
- G. Propeller optimization** by introducing a tip-rake modification

