“Hellenic Petroleum Marketing Companies Association”

AN INNOVATIVE APPROACH IN GREEK ISLANDS FUEL SUPPLY CHAIN

June 2021

ΣΕΕΠΕ
ΣΥΝΔΕΣΜΟΣ ΕΤΑΙΡΙΩΝ ΕΜΠΟΡΙΑΣ ΠΕΤΡΕΛΑΙΟΕΙΔΩΝ ΕΛΛΑΔΟΣ

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Concerning safety, changes usually start with a tragedy: Hrisi Avgi shipwreck,1983

The vessel carried 8 tanktrucks, 4 trucks and 42 people

Due to bad weather and insufficient bonding, tanktrucks moved in the garage hitting each other and the hull

The vessel was inclined and a fire started

Only 14 people were saved

After that, dangerous products should be transported only on special vessels and not on passenger ships

As a result, islands oil supply became costly and difficult

Big oil companies stopped supplying small islands

Consequences...

1985: ELINOIL proceeds to a solution…

Turning the vessel in a floating oil depot

1988 and 1993: two more vessels added in the fleet

ELINOIL became market leader in small islands market.

Gradually, other oil companies entered the market with similar solutions.

Early 2000's

New European directive for vapor recovery and emission control

New ADR

Gradually land oil depots change their loading equipment in favor of safety, loading speed and environment protection

The island market becomes bigger and demanding as tourism grows and road network is expanding

Islands become crowded, especially in summertime and vessel unloading alongside just next to people and yachts problematic

Thus, big safety issues arise

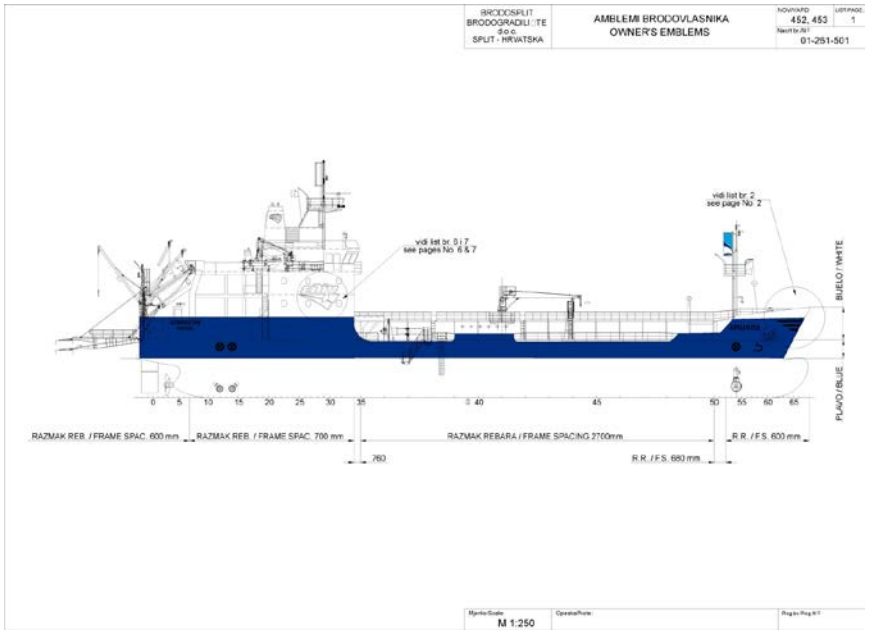
ELINOIL decides to proceed to a new era

Solution: the building of new “hybrid” Tanker- RoRos

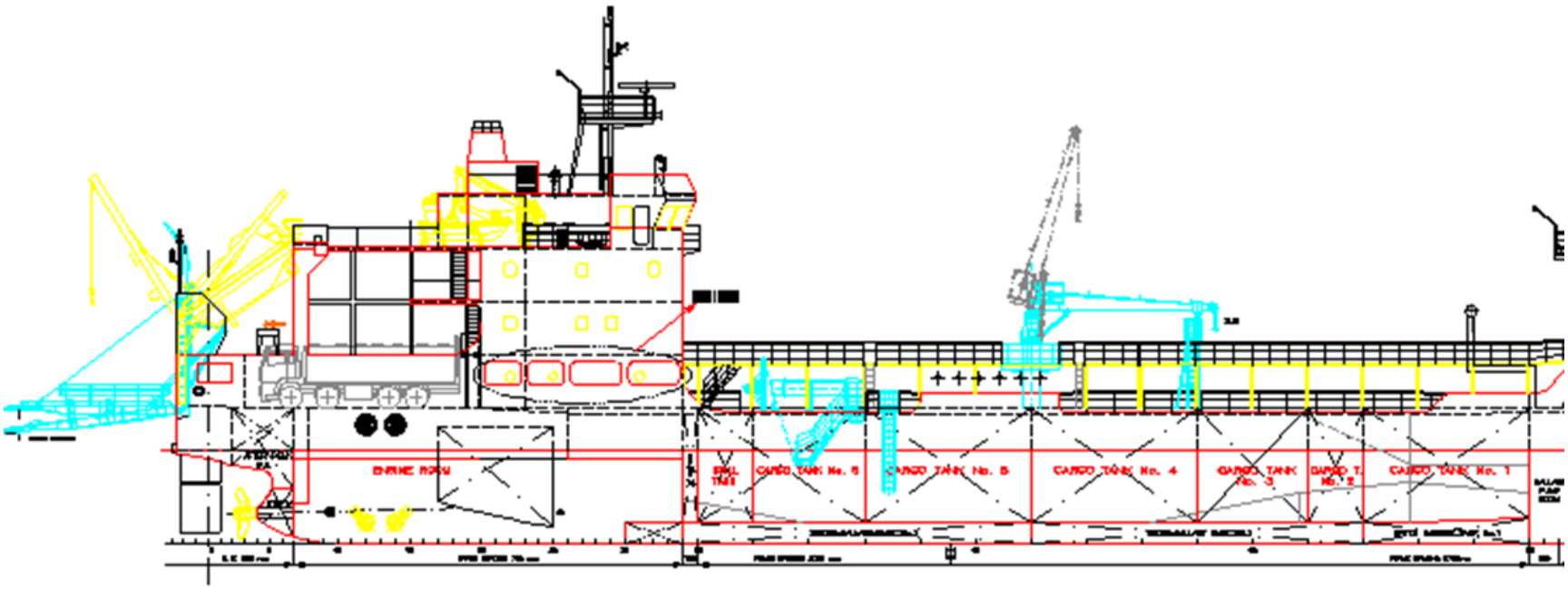
Bigger, faster and more important: safer

Double hull

Applying modern technology on in-garage truck loading, vapor recovery, modern tanktrucks, stern docking



The result was a prototype, state of the art vessel



There where a lot of operational and constraction restrictions to be settled

Two vessels were built and delivered in 2006

Innovation

The first vessels Tankers–RoRo

Pitch propeller

Bow thruster/ Stern thrusters

Stern docking -catapult

Framo submerged pumps

In-garage loading

5 products, fully automated bottom loading system

Special constructed tanktrucks

Vapor recovery

Overfill protection

Integrated data connection system, including vessel and truck tanks measuring systems and loading automation systems


373

Awards!

Vessel were awarded from Lloyd's List for environmental protection

Environmental Protection Notice

Ikopolis environmental sensitivity award for environmental protection innovation

ecocity

Towards 2050 and decarbonization

Small system size makes island grids good candidates to demonstrate the shift in power generation from fossil fuels to local renewable sources.

New operational procedures and enabling measures could boost solar photovoltaic (PV) power in the system as well as adding more hydropower.

By 2030, more than 60% of real-time demand could be met by wind and solar energy.

This means over a third more wind and nearly a quarter more solar than in recent years, while slashing the use of natural gas and oil-based fuels by more than a quarter.

This could cut system operating costs as well as CO_2 emissions.

Petroleum Marketing Companies:

Realize the change, expecting island fuel market to fall rapidly

Adopt new fuels and technologies

Support Low Sulphur and Low Carbon Fuels

Transform their supply chains to adapt to the new era

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What is next for Tanker-RoRo Vessels?

New role and structure for the island supply chain

Logistics merging

New vessels or modifications for carrying LNG/LPG

Transportation of hydrogen from islands to mainland

IMO Type-C LNG Fuel Tank Application

- 250cbm LNG Fuel Tank
- For DWT 3,600 Ton Oil/Chemical Tanker
- Integrated with Fuel Gas Supply System

Thank you!