“Why Baleària opted for LNG?”

“Reducing air pollution from ships in the Mediterranean Sea”

March, 28th 2017
About BALEÀRIA

Brief summary of Baleària activity
1. About Baleària

«Baleària is the leading Spanish shipping line in passenger and cargo services to the Balearic Islands, and one of the largest operators in the Strait of Gibraltar, while also having a presence in a further four countries»

5 countries | 18 routes | 20 regional offices | 25 ships | 1,500 employees

«The company, which was founded in 1998, is a watchword for service, innovation and social responsibility in the Spanish maritime transport sector, and it is notable for the constant growth achieved through opening new routes and adding ships to its fleet»
2. Mission

«The Baleària group mission is to respond to society’s maritime transportation needs by offering customers quality services while at the same time respecting the environment»

«Company shareholders are provided with adequate profits; and employees enjoy the possibility of both professional and personal development»

«Baleària is a citizen company -we know our obligations and our rights- and responsible -we try to respond in a balanced way to the legitimate expectations of our stakeholders-»
3. Route Map
4. Innovation

«For Baleària, innovation is the way to make a company competitive and to achieve excellence in management. The company works above all on technological innovation projects connected with its ships and energy efficiency»

**A sustainable fleet and efficient sailing**

«The company's competitiveness is based on efficient ships capable of reducing fuel consumption (which accounts for some 40% of operating costs), while also minimizing pollutant emissions in accordance with its environmental commitment»

**Pioneer in the use of liquefied natural gas (LNG)**

«Ordered three LNG fueled ferries, is a pioneering shipping line in the use of this fuel as it reduces contaminating emissions»

«Installed the first natural gas auxiliary engine on a passenger ferry»
5. SDG

«Baleària is a United Nations Global Compact signer and renewed its commitment to society and the protection of human rights in all its activities, taking on the 17 sustainable development goals (SDG’s) that the United Nations proposes towards sustainability»
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Why Baleària opted for LNG?

CCC Culture
1st «C». - Conviction

«We are an innovative, responsible and citizen company, enthusiastic about our activity: connecting territories by sea to increase the development and well-being of the people»

«Appears in our ethical code»

«We are not only efficient but we emit less GHG»

«We are eco-efficient and committed to sustainable development»
The commitment to the LNG means reducing the bunker costs by 35% referring to the MGO.

Betting on sustainable development increases our reputation, because it is what society & our stakeholders want.
3rd «C».- Coercion

«Risk Management ➔ We anticipate to normative coercion»

«MARPOL VI Horizon ➔ 2020: 0,5% Sulphur»
3 SMARTSHIPS

DOUBLE INNOVATION

1. Eco-efficient Navigation
2. Technology - Customers

“Innovation, culture and values in 3 new Smartships”
1. SMARTSHIP - BOB

BALEÀRIA + LaNaval = BoB

Length: 232.2 m
Breadth: 30.4 m
Pers: 1730
Cabins: 281
L/M: 3,330 ML
Cars: 331
2. SMARTSHIP – CN VISENTINI

**Baleària** +

- **Length:** 186.5 m
- **Breadth:** 25.6 m
- **Pers:** 810
- **Cabins:** 123
- **L/M:** 2.180 ML
- **Cars:** 170
3. TECHNICAL aspects

**LNG**
Dual engines: LNG & Gasoil.
Emission reduction: CO2 (30%), NOx (85%), SOx (99%) and Particles (95%).

**LED Lighting**
LED Technology throughout the vessel.
The installation will allow to segregate as needed.

**Air Conditioning Management**
It will allow to segregate by independent zones.
Monitor and automate the setpoint temperature control.
### 3.1 TECHNICAL aspects

**Frequency Inverters**
Allows to work with the propeller at its optimal point.

**Photovoltaic Panels**
700 m² in solar panels.

**Monitoring**
Consumption and power will be monitored. Trim control.

**Optimization of the Structure**
Mathematical models and hydrodynamic tests are performed to optimize the structure.
3.2 TECHNICAL aspects

- **Last Generation Antifouling Paints**
  
  Less consumption, Less emissions.

- **Propulsion System Optimization**
  
  Conducted studies on the number of shafts, maximum efficiency propellers, ...

- **Dynamic Cooling System**
  
  Starts and stops the pumps according to engine needs and sea temperature.
Better ACCESSIBILITY and innovative On Board Services for customers.
5. SMARTSHIP Commitment

**Employees**
- Training.
- Professional development.
- Crew enabled spaces.

**Environment**
- LNG.
- Solar Panels.

**Society**
- Employment creation.
- Welfare and economic development.
- 50 million in wages and 20% in tax expenses.

**Innovation**
- Living lab.
- Eco-efficiency manual.
- Transfer guide to the rest of the fleet.

**Customers**
- More services.
- Mobile interaction.
Thanks you for your attention.