



## Vessels demand: green and smart links, Balearia,

*IV Conferencia CORE LNGas hive*

*27 de noviembre de 2019, Gijón*



---

## 1. About Baleària

---

# ■ About BALEÀRIA



---

## 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, and has a presence in five countries»



«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»



---

## 1. About Baleària

---

### Mission

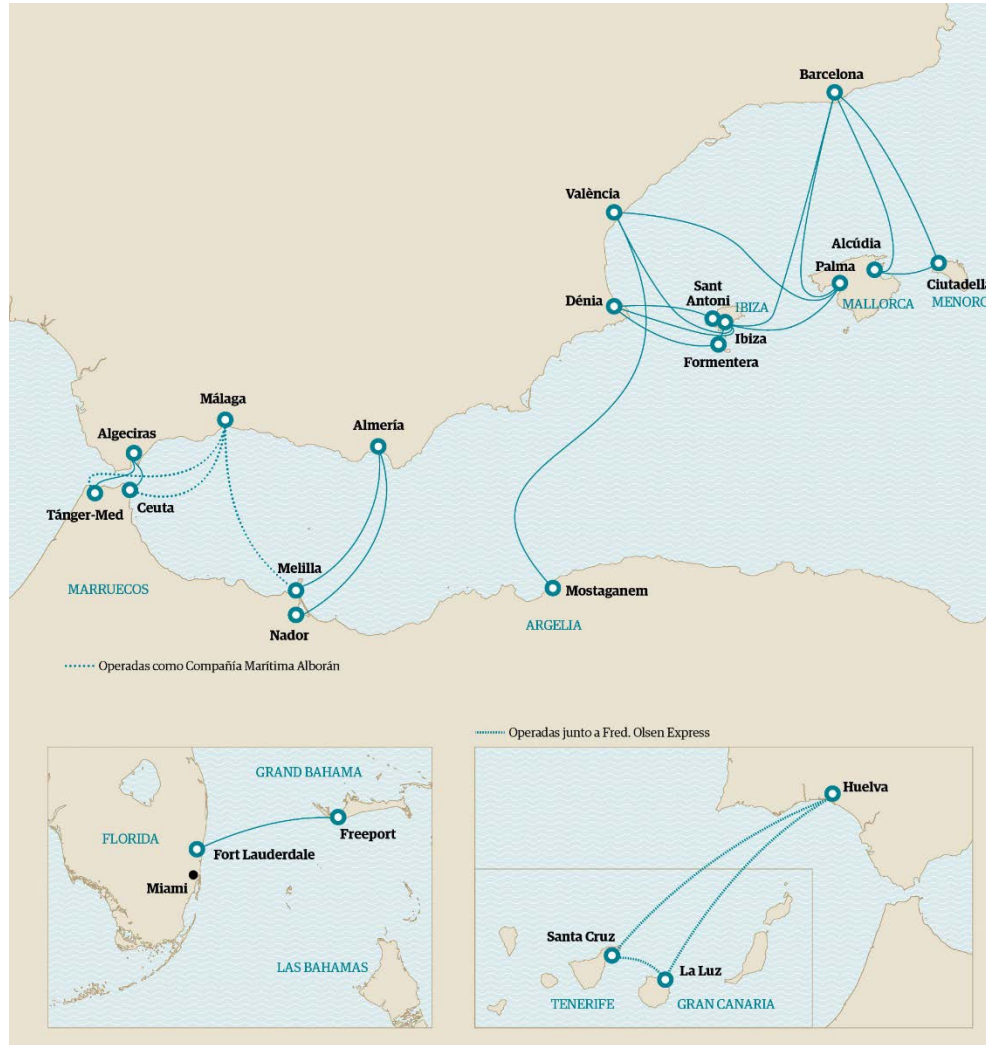
«The Baleària group mission is to respond to society's maritime transportation needs by offering customers quality services while at the same time respecting the environment»

«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-»



# 1. About Baleària

## Route Map





---

## 1. About Baleària

---

### Innovation

«For Baleària, innovation is the way to make a company competitive and to achieve excellence in management»

#### *A sustainable fleet and efficient sailing*

«The company's competitiveness is based on efficient ships capable of reducing fuel consumption (aprox. 40% OPEX), while also minimizing pollutant emissions in accordance with its environmental commitment»

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

«Ordered three new LNG fueled ferries (2 conventional ferry + 1 fast ferry)»

«Installed the first natural gas port generator engine onboard a passenger ferry; ABEL MATUTES»

«Under construction of the first and largest passenger and cargo fast ferry in the world powered by dual natural gas engines»

«Also started a 6 vessel LNG retrofit projects»



## 1. About Baleària

### Sustainable Development Goals (SDG's)

«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»



## 2. BALEÀRIA'S LNG PROJECTS

### ■ BALEÀRIA'S LNG PROJECTS





## 2. BALEÀRIA'S LNG PROJECTS – NEW BUILDINGS

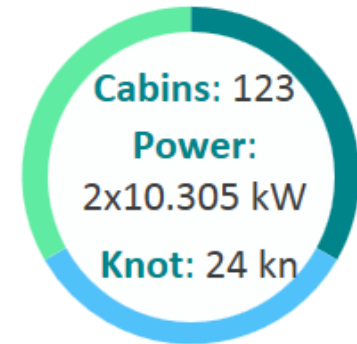
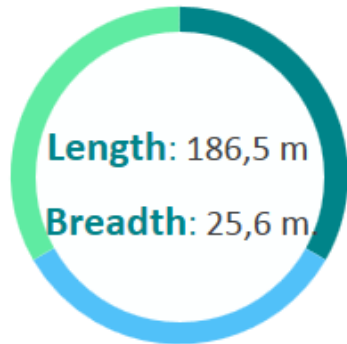
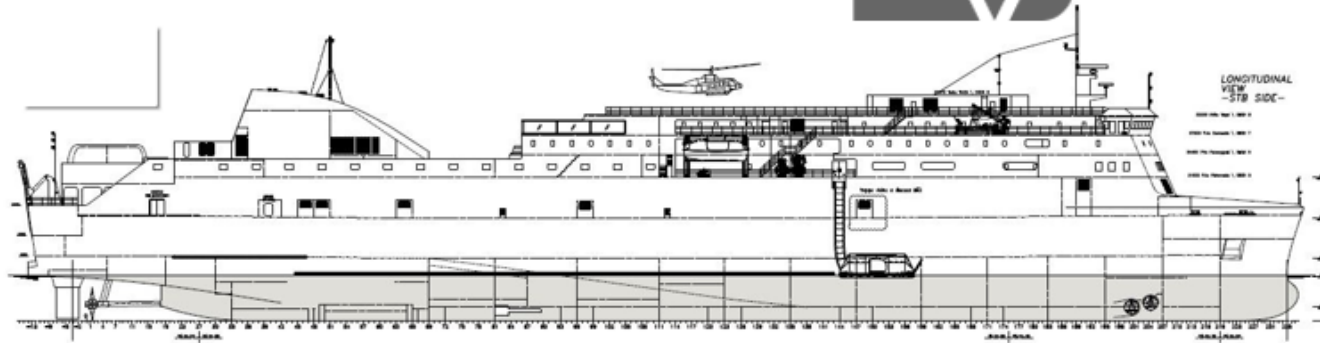
### ■ NEW SHIP BUILDINGS

- ➔ 1. Eco-efficient Navigation
- ➔ 2. Technology - Customers

“Innovation, culture and values in 3 newbuilding Smartships”



**BALEÀRIA**



## 2. BALEÀRIA'S LNG PROJECTS – NEW BUILDINGS

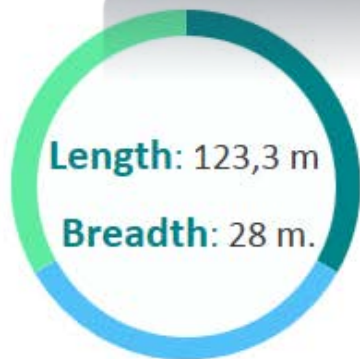
## HYPATIA DE ALEJANDRIA

«First LNG powered ferry in the Mediterranean»





**BALEARIA** +  **ARMON**



## 2. BALEÀRIA'S LNG PROJECTS – NEW BUILDINGS

ELEANOR ROOSEVELT

«First and largest passenger and cargo Fast Ferry in the world powered by dual natural gas engines»

«Has a specific third central hull to house a retractable T-Foil»

«2 LNG storage tanks → 400 miles of autonomy»





---

## 2. BALEÀRIA'S LNG PROJECTS

---

### ■ LNG ME Retrofit of 6 Vessels



### Baleària Gets EU Grant for Ferry Upgrade



Image Courtesy: Baleària

Spanish ferry operator Baleària Eurolineas Maritimas has received a grant of EUR 11.8 million (USD 13.6 million) from the European Commission to retrofit [five of its ferries](#) to run on LNG.

The funding represents 20% of the total sum of EUR 59 million needed for the project implementation, according to data provided by the European Commission.

As informed by Baleària, the EU has described as excellent the project entitled “LNGHIVE2 vessels demand: Green and smart links – LNG solutions for smart maritime links in Spanish Core ports”.

The project will be carried out from the end of 2018 until 2021. It will encompass the upgrade of five ships — Nàpoles, Abel Matutes, Sicilia, Bahama Mama and Martin i Soler. Nàpoles will be the first to be fitted with gas propulsion.

Commenting on the recently awarded grant, Adolfo Utor, president of Baleària, said it is in line with the shipping company's strategy to have the most sustainable and eco-efficient fleet in the sector in the medium term.

Baleària is currently building two smart ships powered by LNG at the Visentini shipyard in Italy, the first of which is expected to be operational as of February 2019.

World Maritime News Staff

## 2. BALEÀRIA'S LNG PROJECTS – RETROFITS

*6 vessels are being converted into Dual Fuel propulsion*

### NAPOLES



### ABEL MATUTES



### SICILIA



### BAHAM MAMA



### HEDY LAMARR



### MARTIN I SOLER



- LNG Retrofits Engineering is developed by COTENAVAL.



## 2. BALEÀRIA'S LNG PROJECTS – RETROFITS

## Main Engines to be remotorized

### ■ NAPOLES

- Current: MAN 9L48/61
- Remotorization to: MAN 9L51/60DF
- Power: 8550 Kw/motor

### ■ ABEL MATUTES

- Current: MAK 9M43 DF
- Remotorization to: MAK 9M46DF
- Power: 8685 Kw/motor

### ■ BAHAMA MAMA

- Current: MAK 9M43 DF
- Remotorization to: MAK 9M46DF
- Power: 8685 Kw/motor

### ■ SICILIA

- Current: MAN 9L48/61
- Remotorization to: MAN 9L51/60DF
- Power: 8550 Kw/motor

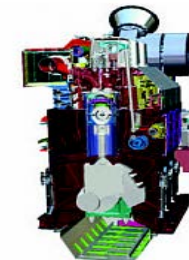
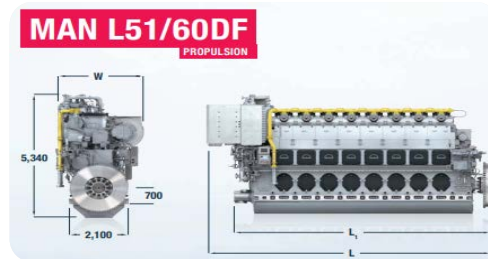
### ■ MARTIN I SOLER

- Current: MAK 9M43 DF
- Remotorization to: MAK 9M46DF
- Power: 8685 Kw/motor

### ■ HEDY LAMARR

- Current: MAN 9L48B
- Remotorization to: MAN 9L51/60DF
- Power: 8550 Kw/motor

9M46DF



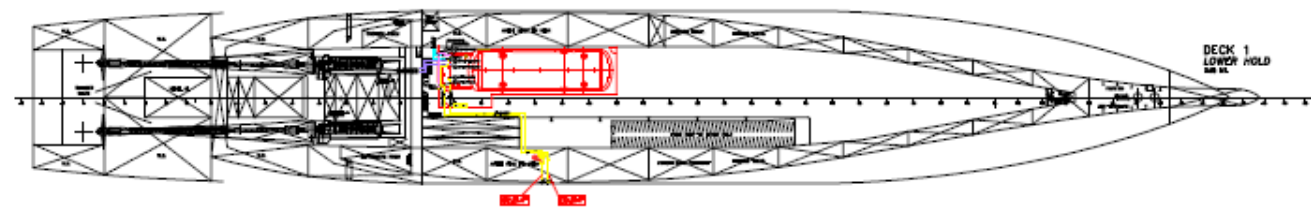
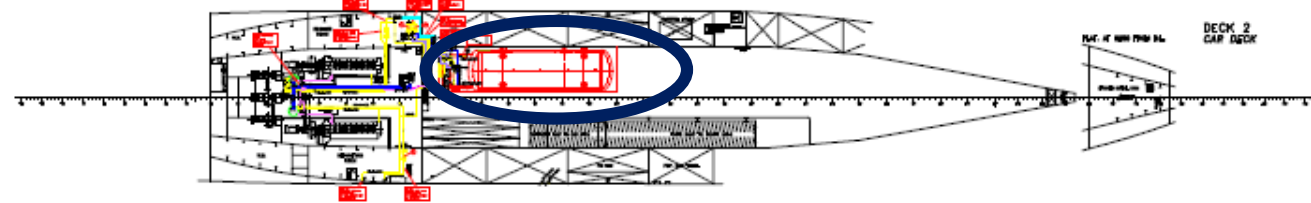
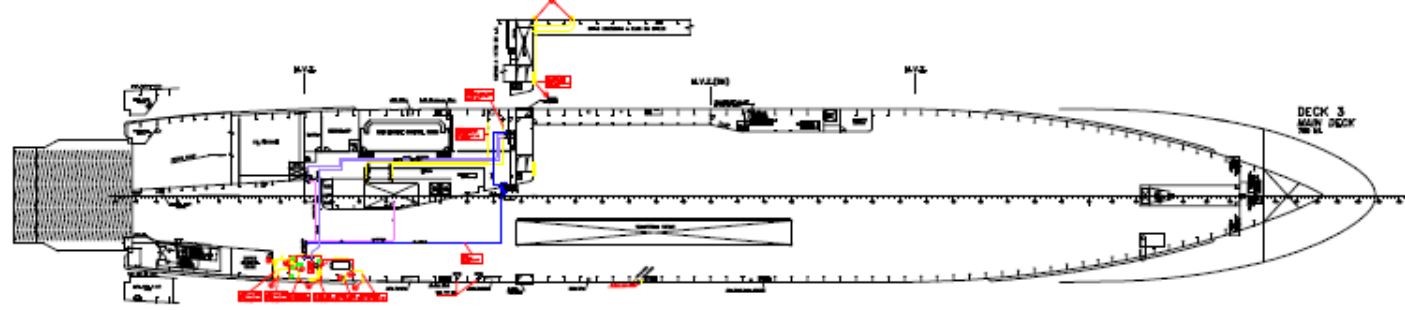
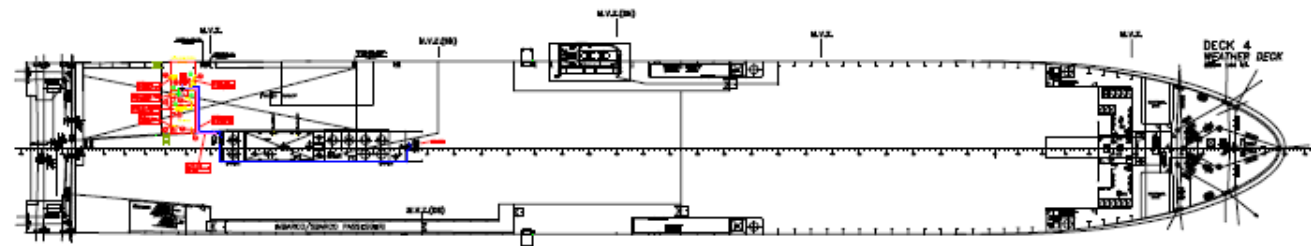
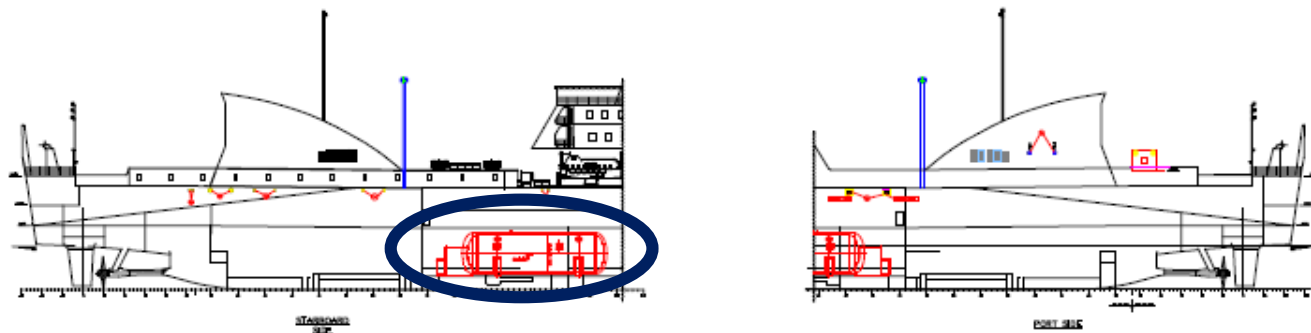


## 2. BALEÀRIA'S LNG PROJECTS – RETROFITS

## Main Characteristics

	Length	Beam	Draft	Speed	Flag	Class	m3 LNG	Range (h)	Range (nM)
<b>Napoles</b>	186,00	25,60	6,50	23,00	Chipre	RINA	1x440	57	1200
<b>Abel Matutes</b>	150,42	23,40	5,54	23,00	España	BV	2x178	48	957
<b>Martin i Soler</b>	165,30	25,60	5,80	23,00	España	BV	280	38	753
<b>Sicilia</b>	186,00	25,60	6,50	23,00	Chipre	RINA	1x425	57	1131
<b>Bahama Mama</b>	154,35	24,20	5,50	23,00	Malta	BV	2x140	38	753
<b>Hedy Lamarr</b>	186,50	25,60	6,85	24,00	Chipre	RINA	1x425	57	1131





NOTA:  
 -Este rubrico es esquemático.  
 -Para un rubrico más aproximado, ver el rubrico (adjunto).

- YTR - Yacht Technology & Training Center & YTC
- YTC - Yacht Technology & Training Center
- YTC - Yacht Technology & Training Center
- YTC - Yacht Technology & Training Center
- YTC - Yacht Technology & Training Center

BALLEARA - BUQUE "NAPOLES"	
REMOTORIZACION BUQUE "NAPOLES"	
PREDESARROLLO DE TUBERIA	

### NAPOLES



- Structure
- Main Engine
- LNG Plant
- LNG/NG Piping
- Gas Detection
- Fire Detection
- IAMS
- Nitrogen
- Venting
- Control Air
- Starting Air
- HT Water
- LT Water
- Ventilation
- Auxiliary Equipment
- Insulation
- Doors
- Dry Chemical Powder

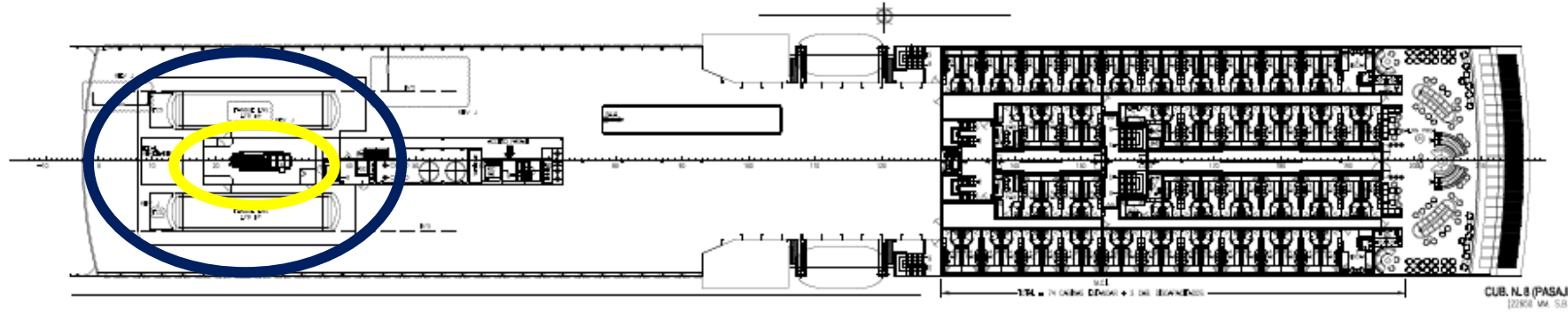
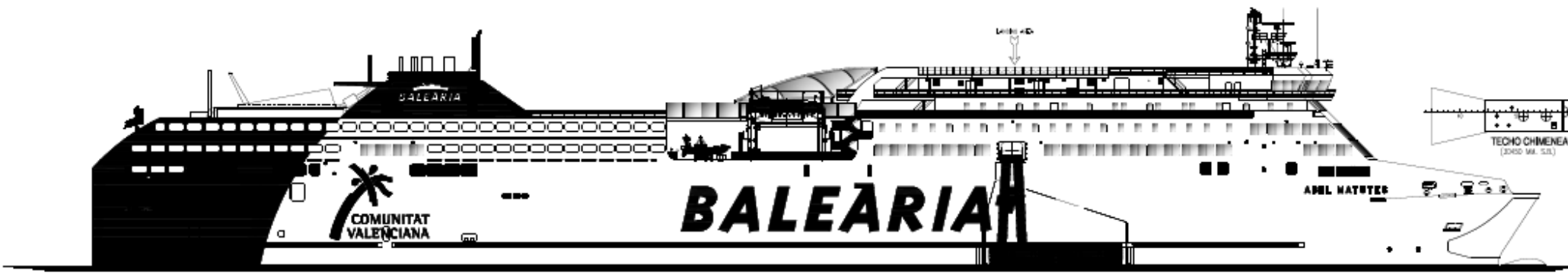
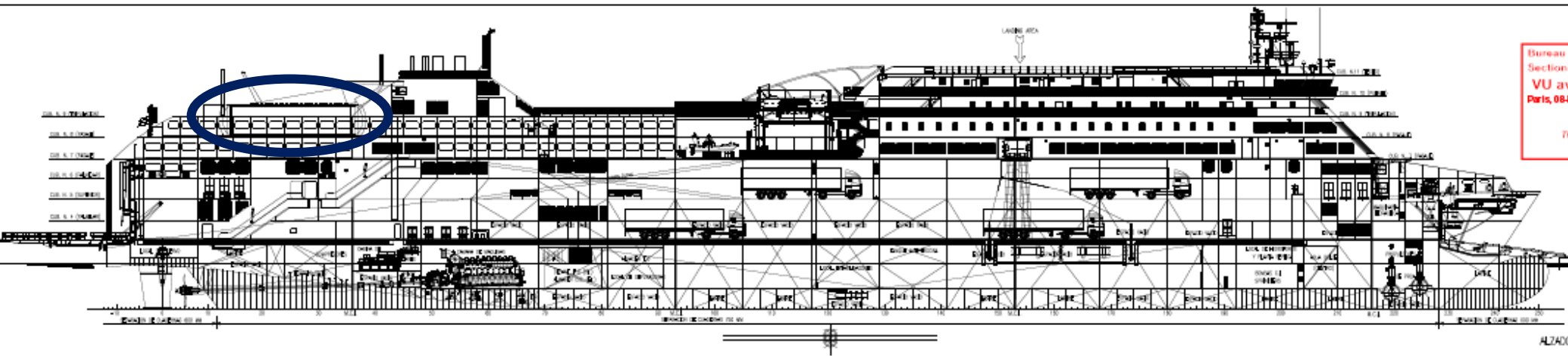


# ***BALEÀRIA***





Bureau  
Section  
VU av  
Paris, 08





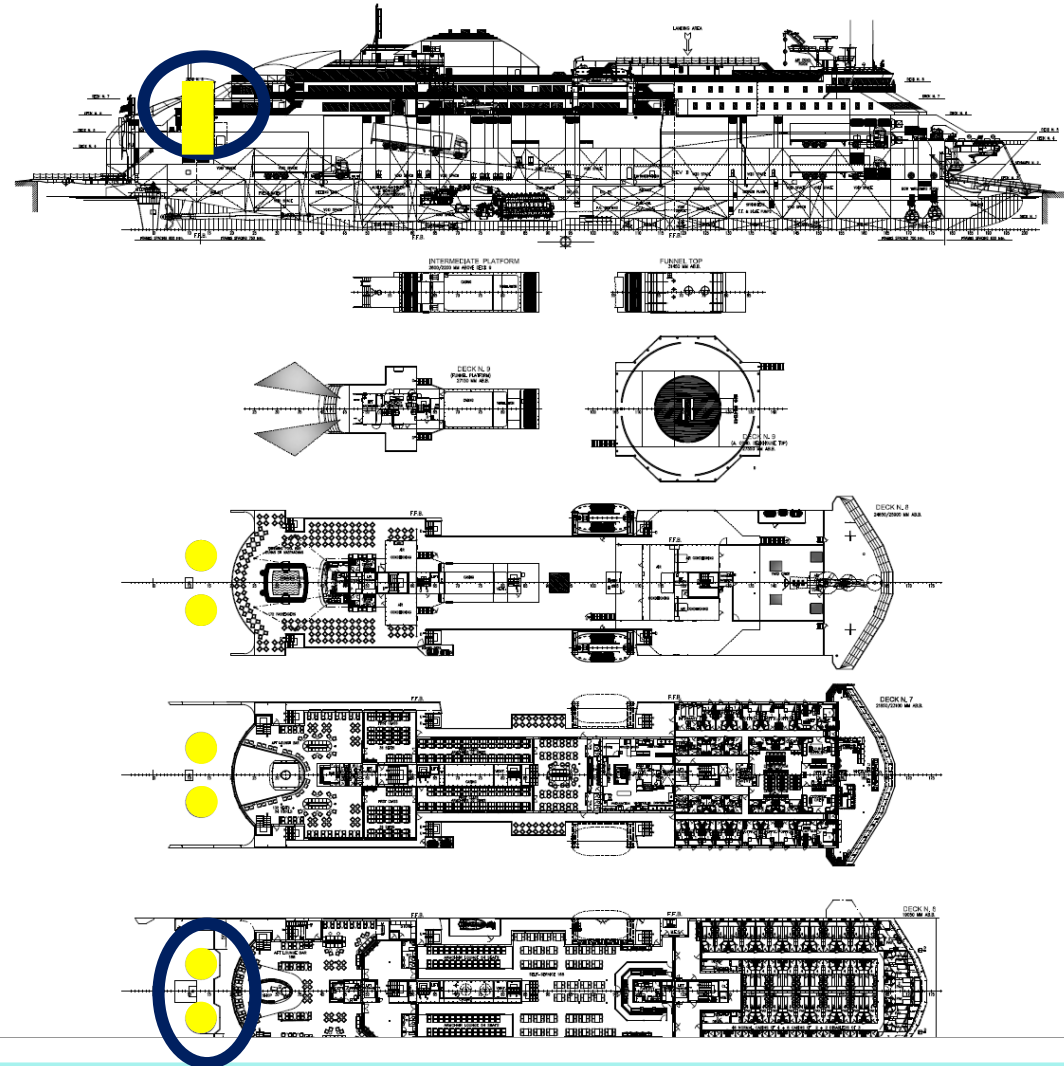
### ABEL MATUTES



***BALEÀRIA***



### BAHAM MAMA





### BAHAM MAMA







*6 vessels will be remotorized*

**NAPOLES**



**ABEL MATUTES**



**SICILIA**



**BAHAM MAMA**



**HEDY LAMARR**



**MARTIN I SOLER**



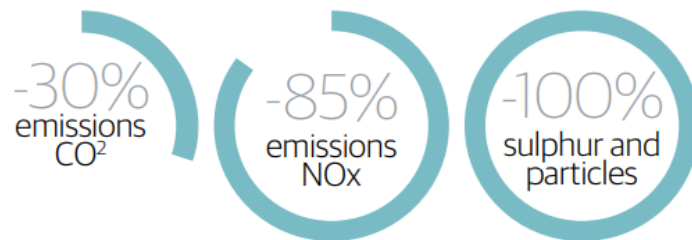
# ■ Environmental impact over the ports and the cities



## 4.1 REDUCTION OF GHG EMISSIONS

«LNG is one of the most environmentally friendly fossil fuels. Its use considerably reduces emissions, with an immediate impact on air quality and the greenhouse effect»

«The use of LNG will lead to a percentage reduction in emissions of:»



## 2. BALEÀRIA'S LNG PROJECTS – RETROFITS

## Annual emissions reduction

- TOTAL reduction of NOx, SOx y CO2 annual emissions with this project:

	Potencia (kW)	Ahorro SOx (ton)	Ahorro CO2 (ton) (*)	Ahorro NOx (ton)
<b>ABEL MATUTES</b>	8.685	77,14	9.257,34	885,13
<b>BAHAMA MAMA</b>	8.685	77,14	9.257,34	885,13
<b>MARTIN I SOLER</b>	8.685	77,14	9.257,34	885,13
<b>NAPOLES</b>	8.550	75,95	9.113,45	871,37
<b>SICILIA</b>	8.550	75,95	9.113,45	871,37
<b>HYPATIA DE ALEJANDRIA</b>	10.305	91,53	10.984,10	1.050,23
<b>MARIE CURIE</b>	10.305	91,53	10.984,10	1.050,23
<b>HEDY LAMARR</b>	9.450	83,94	10.072,76	963,10
<b>ELEANOR ROOSEVELT</b>	8.800	25,41	13.723,78	1.312,19
<b>TOTAL</b>	<b>82.060</b>	<b>569,59</b>	<b>92.147,37 (**)</b>	<b>6.535,30</b>

(\*) Considering methane slips.

(\*\*) CO2 emissions equivalent to 45.000 cars.





## 4.2 IMPROVEMENT OF AIR QUALITY

«As the LNG reduces the emissions, the air quality of the areas where the vessel operates will improve»

«This will especially affect the Ports, where the vessels stay for hours»

«Using LNG for the Auxiliary Engines will improve drastically the air quality in the ports, and therefore in the cities»





### 4.3 IMPROVEMENT OF THE STAKEHOLDER'S ACCEPTANCE

---

«The use of clean energy that reduces the emissions to the atmosphere, such as LNG, could improve the vision of pollution in ports by stakeholders and public opinion»

«It is very important to change that way of thinking, so that ports are not seen as pollution sources in cities, but rather as drivers of the development of cities in an environmentally respectful way»

---

---

# Thanks you for your attention



**Pablo Garcia Anduiza**

*Director Proyectos Flota / Fleet Projects Manager*

[pablo.garcia@balearia.com](mailto:pablo.garcia@balearia.com)

