GISBIR
TURKISH SHIPBUILDERS' ASSOCIATION

Current State of the Turkish Shipbuilding Industry and Maritime Activities and the Related Challenges

Mehtap Ozdemir
Turkish Shipbuilders' Association (GISBIR)

ASEF FORUM 2025, Yokohama

GISBIR: Turkish Shipbuilders' Association

GISBIR
TURKISH SHIPBUILDERS' ASSOCIATION

- is one of the oldest NGOs in Turkey established in 1971 with almost 100 members,
- is member of international shipbuilding associations and organizations,
  - SeaEurope
  - ASEF
  - Waterborne TP, E-LASS
  - UNEP/MAP-Barcelona convention
- promotes Turkish shipbuilding in international environment,
- develops shipbuilding skills through training programmes,
- collects data related to shipbuilding,
- participates in international R&D projects,
- disseminates knowledge through seminars, meetings, conferences to all stakeholders,
- conducts and finances marine environment protection projects such as plantation of seagrass "posidonia" in Mediterranean sea.

SEA Europe
Shipyards' & Maritime Equipment Association

Active Shipbuilding Experts' Federation
ASEF

WATERBORNE

E-LASS

UN environment programme

Mediterranean Action Plan
Barcelona Convention

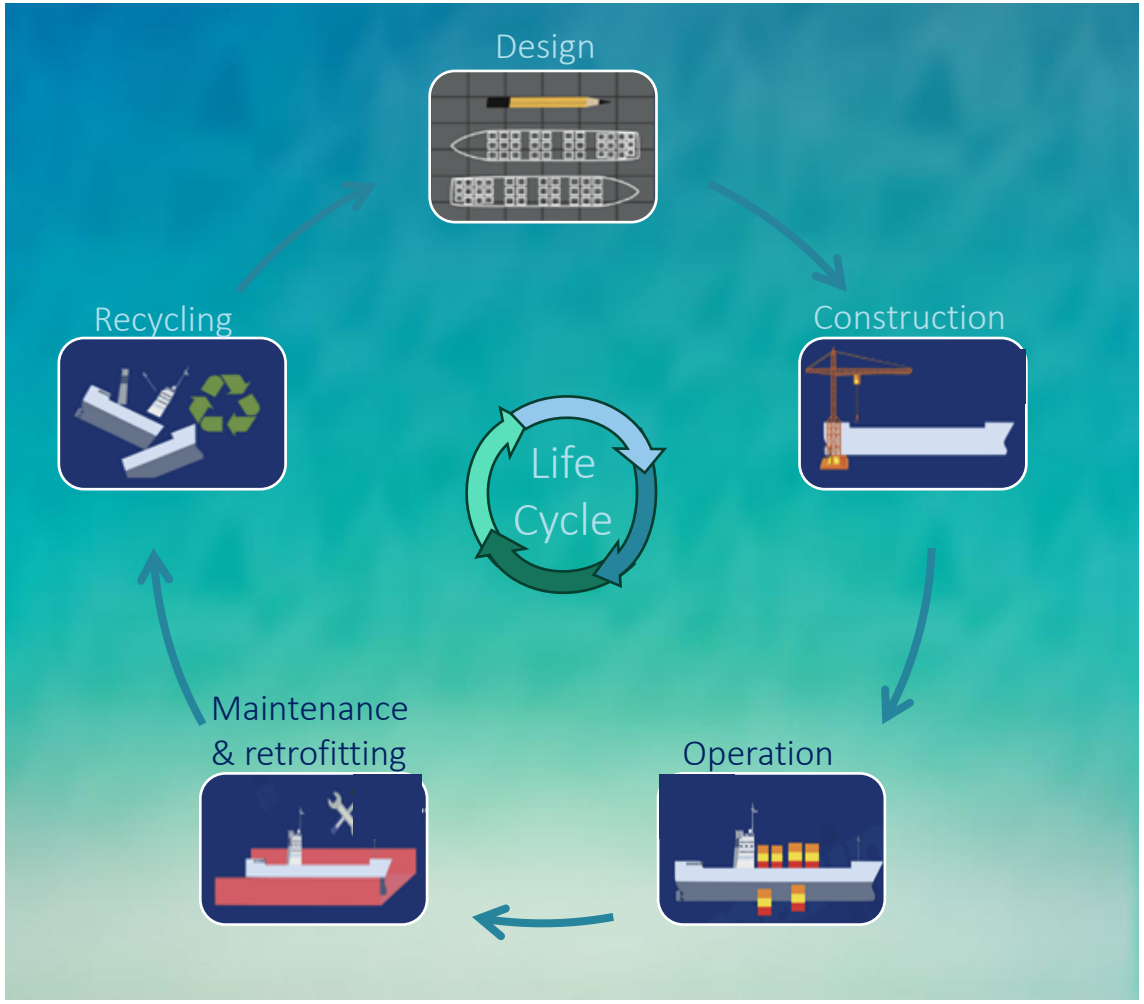
Turkish Maritime Sector

Türkiye is one of few countries active in all steps of ship life cycle

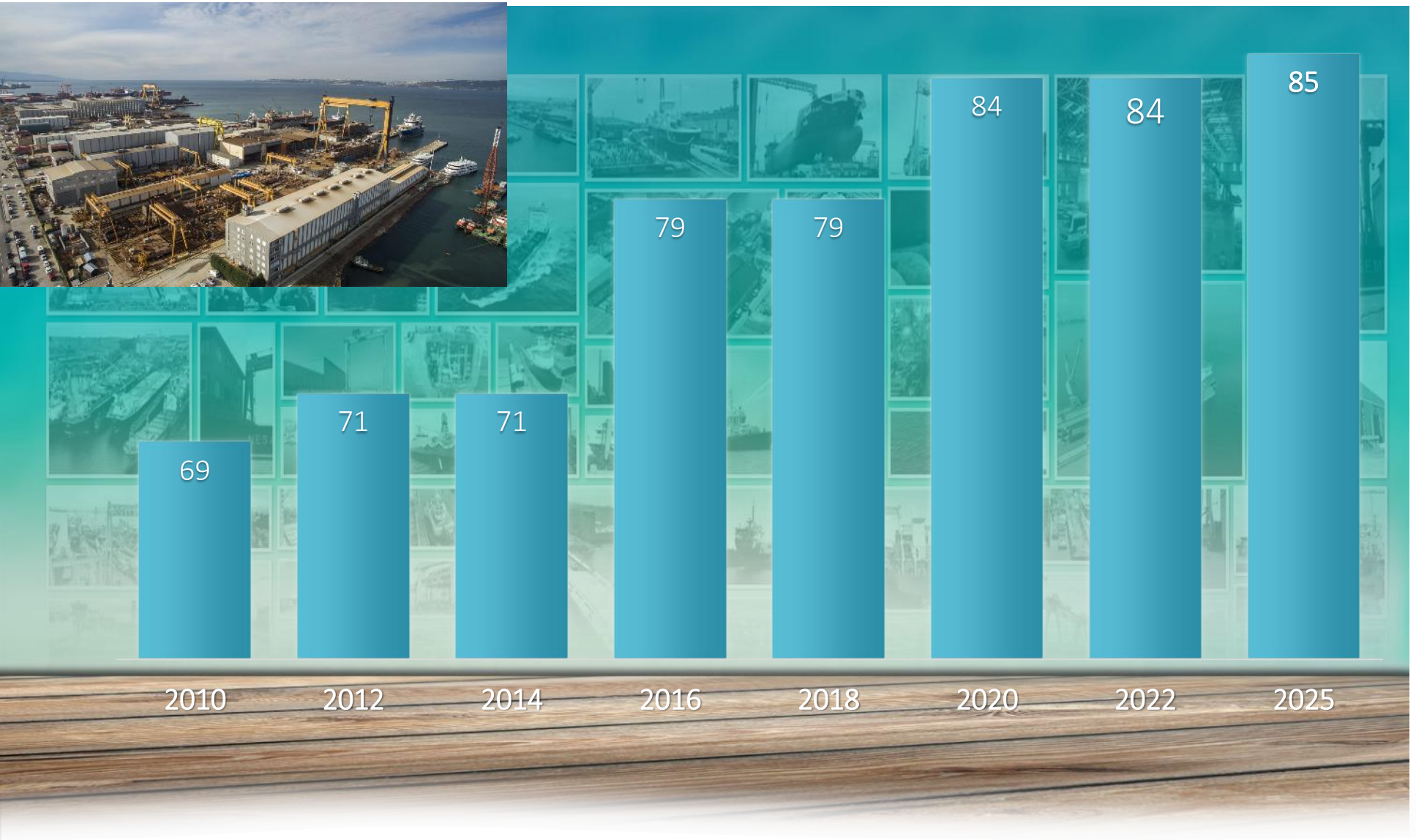
- Ship design
- Shipbuilding & equipment manufacturing
- Ship owning & ship operation
- Ship maintenance, retrofitting
- Ship recycling

but also active in

- Seafarer education and training
- Ship bunkering
- Ports operations & logistics

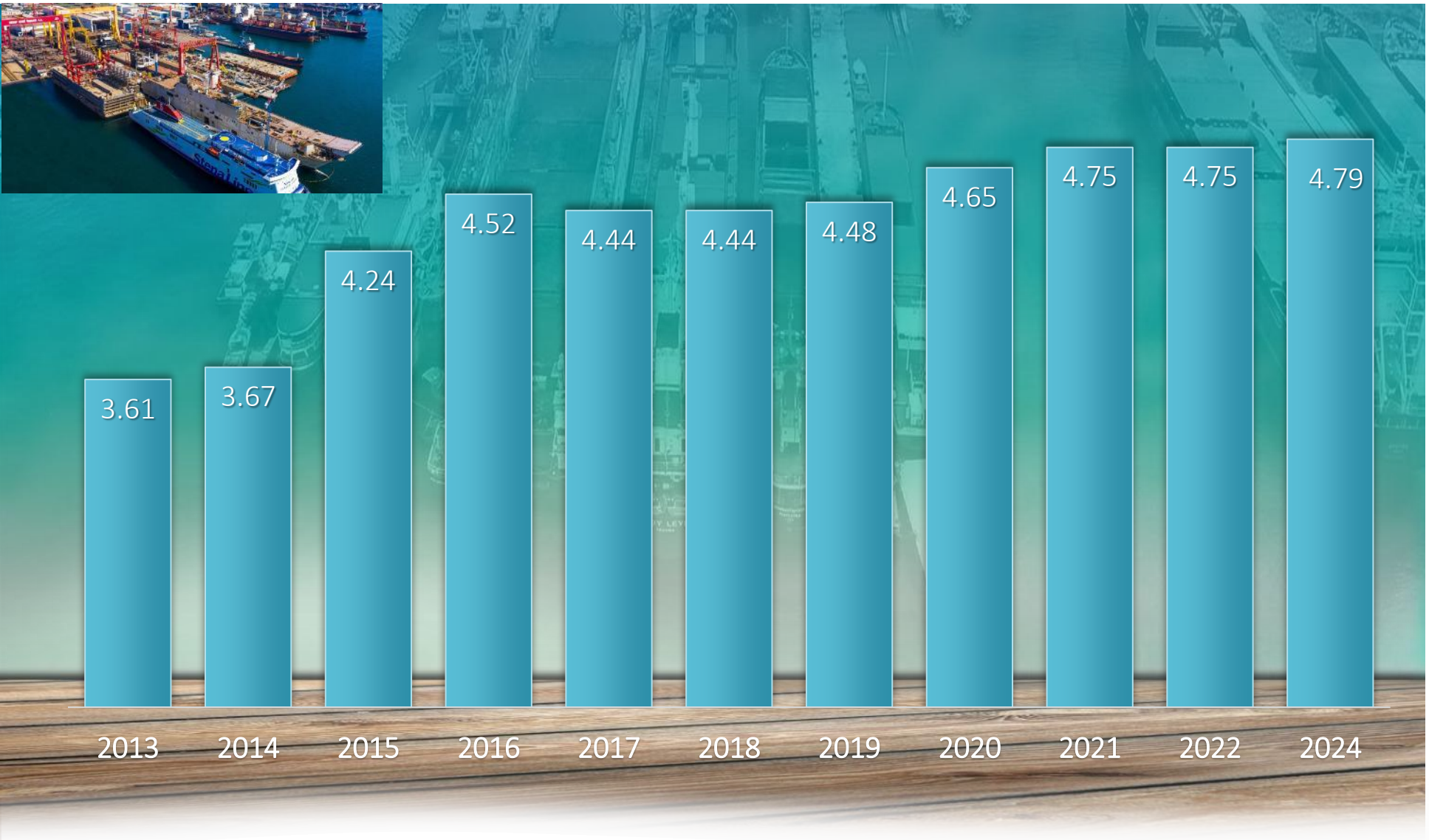


Turkish Shipbuilding Industry



85 shipyards

New Building Capacity



85 shipyards

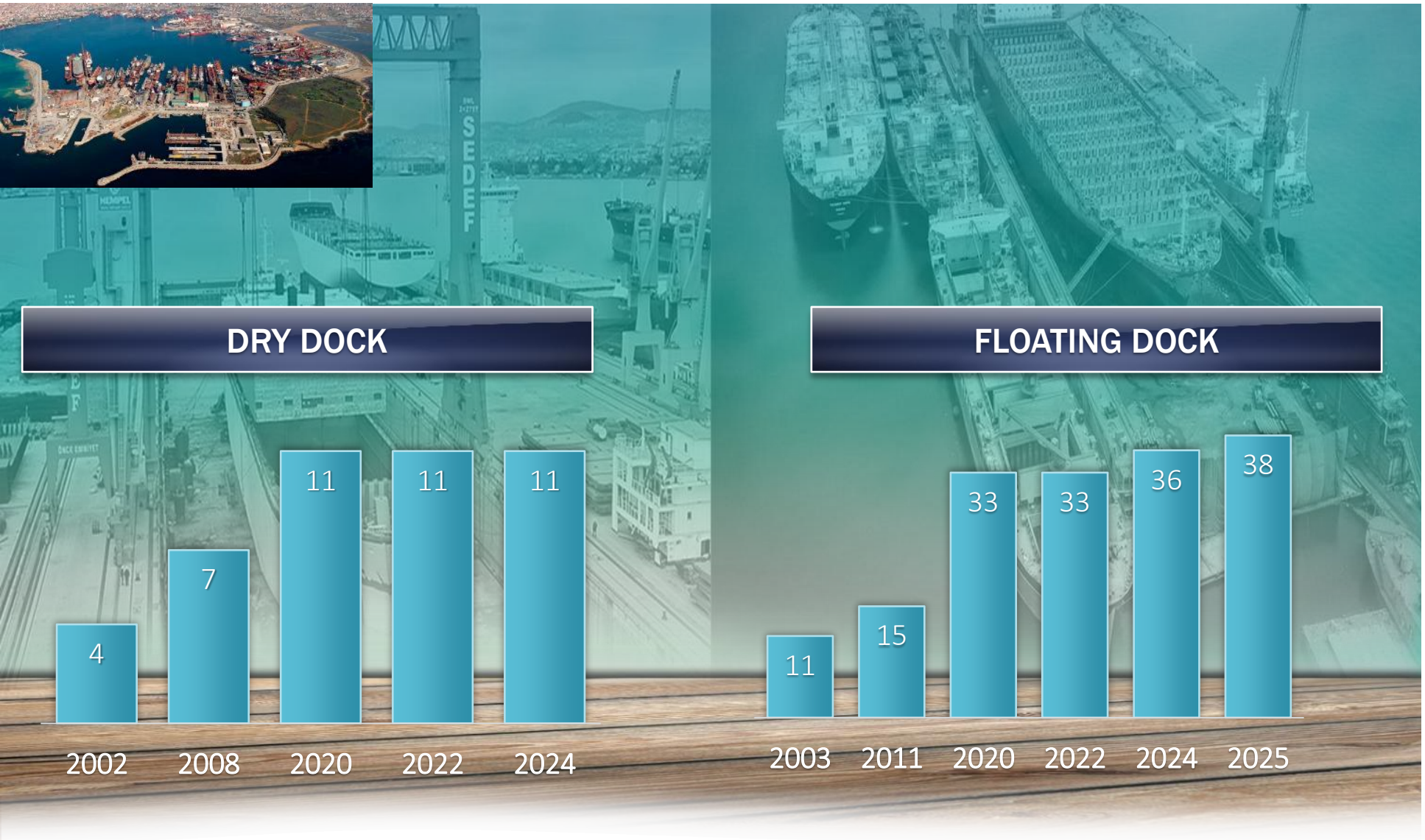
4.79 million DWT capacity

8th In number of ships

12th In CGT

Dock Capacity

GISBIR
TURKISH SHIPBUILDERS' ASSOCIATION

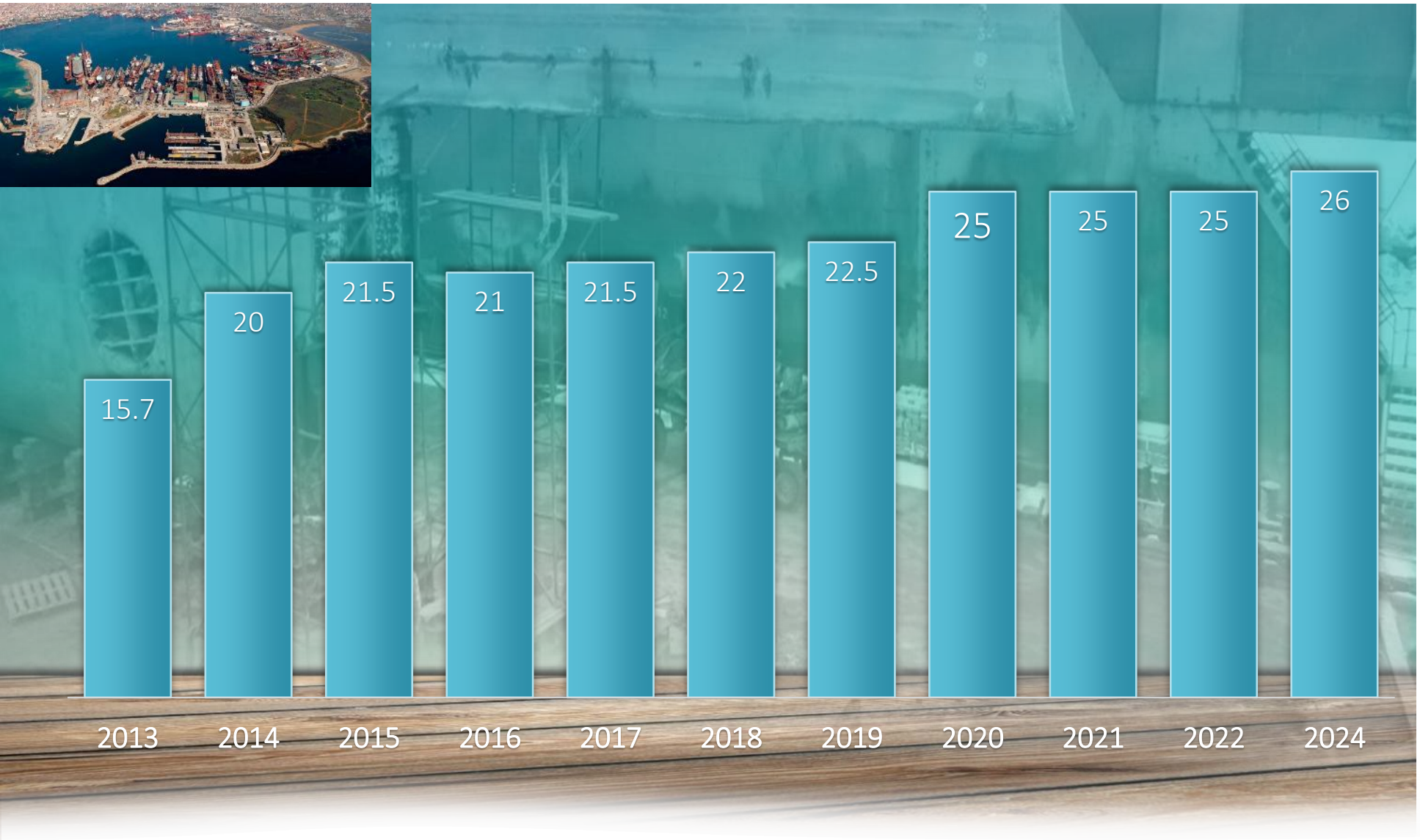


38 Floating docks

11 Dry docks

Repair and Maintenance Capacity

GISBIR
TURKISH SHIPBUILDERS' ASSOCIATION



26 Million DWT capacity

38 Floating docks

11 Dry docks

2nd Largest capacity in ship maintenance

FERRIES / PASSENGER VESSELS & MEGAYACHTS

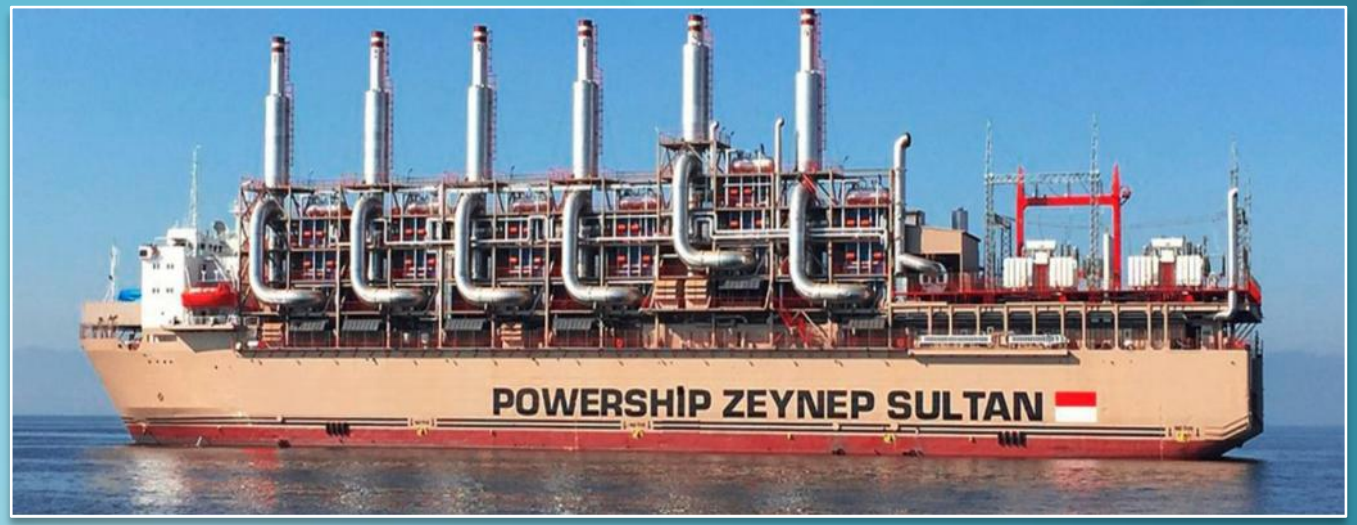
SEFINE SHIPYARD
RO-RO Car & Passenger Ferry
200 PCU Diesel-Electric

CEMRE SHIPYARD
Ferry/Ropax
Largest Zero Emission Freight FerryDiesel/
Battery (10 MWh battery) Upgrade to Methanol

TERSAN SHIPYARD
Coastal Passenger Ferry Series
World's Largest Battery Packs
Hybrid Powered (LNG&Battery)

ENERGY VESSELS

SEDEF SHIPYARD
Onur Sultan
Powership



SEDEF SHIPYARD
Zeynep Sultan
Powership

SEDEF SHIPYARD
Orhan Bey
Powership

TUGBOATS & OFFSHORE SUPPLY VESSELS

TK TUZLA SHIPYARD & NAVTEK
The World's 1st Battery-Powered Full Electric Harbour Tugboat
2021 TUG OF THE YEAR AWARD WINNER

SANMAR SHIPYARD
The World's 1st LNG Fuelled Escort Tug

SANMAR SHIPYARD
AVD Hybrid Tug

SANMAR SHIPYARD
World's 1st Remotely Controlled Commercially Operated Tug

CEMRE SHIPYARD
Windfarm Support Vessel
1st Hybrid-battery, DP2 SOV

TERSAN SHIPYARD
Construction Service Operating Vessel (CSOV)
Methanol-Marine Diesel Oil (MDO)/HVO Powered DP2

CEMRE SHIPYARD
The World's 1st DP2 SWATH Type Service Operation Vessel
Powered by Batteries and Dual Fuel /Methanol

UZMAR SHIPYARD
Pollution Control Vessel

FISHING VESSELS

SEFİNE SHIPYARD
Dual Fuel : LNG, Biogas and Potentially Ammonia
Live Fish Carrier

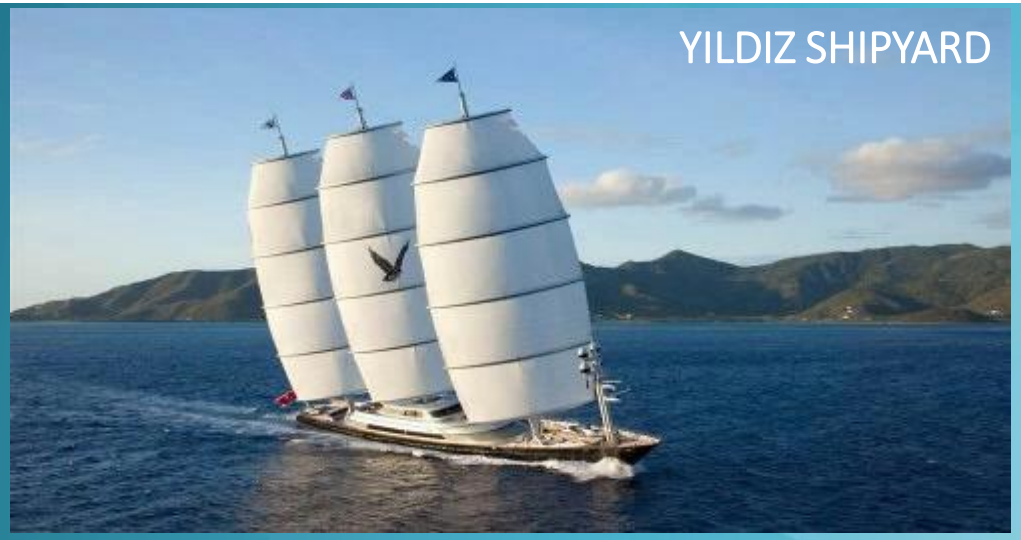
CEMRE SHIPYARD
The World’s Largest Live Fish Carrier
Hybrid/Battery Powered

TERSAN SHIPYARD
The World’s First Purpose-Built Vessel Combined Longliner and Danish Seiner
2020 WORK BOAT WORLD BEST LONGLINER

TERSAN SHIPYARD
Direct LNG Fuelled
Live Fish Carrier

CEMRE SHIPYARD
World's first LNG&Battery Driven Purse Seiner Trawler

WIND POWERED/ASSISTED SHIP PROPULSION



Maltese Falcon: First Dynarig Sailing Yacht (1990)

Neoliner: First Primary Wind Power RoRo (2023)

First Primary Wind Powered Containership (2025)

RETROFITTING, MAINTENANCE, MODERNIZATION

Erge: First Gate rudder Retrofit (2023)

Pergamon Seaway: Air Lubrication retrofit(2023)

Propeller, duct, fin, boss cap retrofits

500 + Ballast Water treatment, 300 + Scrubber retrofits

Turkish Shipyard Production is based on Innovation

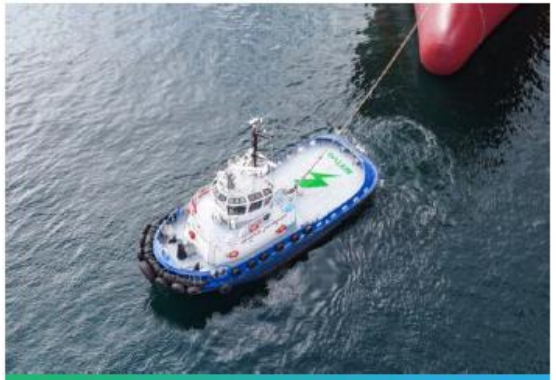
- Turkish shipyards produces ferries, tugs, fishing vessels, and mega yachts
- Over 60 % of the production is ship with alternative fuels, i.e. electric/battery/hybrid, LNG, methanol powered
- Shipyard region aims to be decarbonised port facility
  - Served with 4 electric tugs (The largest battery powered tug fleet in the world)
  - Solar renewable energy production onsite
  - Remote wind energy production
  - Electricity with I-Rec
  - Energy efficient lighting
  - E-cranes, E-trucks, E-handlers, Zeetugs

Blue Economy - Green Transition

2023 | 2026 | 2030 | 2050

Innovation Example: Zeetug

ZEETUGs in Operation



NV712-ZEETUG30
IN OPERATION

Lenght (O.A)	Abt.	18.70 m
Breadth (MLD)	Abt.	6.70 m
Depth (MLD)	Abt.	4.65 m
Draught (Design)	Abt.	3.50 m
Speed at Design Draught		10 knots
Electric Motor		2x925 kW
Personel Number		4 Persons

NV717-ZEETUG30
IN OPERATION

Lenght (O.A)	Abt.	18.70 m
Breadth (MLD)	Abt.	6.70 m
Depth (MLD)	Abt.	4.30 m
Draught (Design)	Abt.	3.15 m
Speed at Design Draught		10 knots
Electric Motor		2x925 kW
Personel Number		4 Persons

NV719-ZEETUG45
IN OPERATION

Lenght (O.A)	Abt.	26.20 m
Beam (MLD)	Abt.	10.60 m
Depth (MLD)	Abt.	4.32 m
Extreme Draught (MLD)	Abt.	4.55 m
Estimated Top Speed		12 knots
Electric Motor		2900 kW
Personel Number		8 Persons

NV720-ZEETUG30
IN OPERATION

Lenght (O.A)	Abt.	18.70 m
Breadth (MLD)	Abt.	6.70 m
Depth (MLD)	Abt.	4.30 m
Draught (Design)	Abt.	3.15 m
Speed at Design Draught		10 knots
Electric Motor		2x925 kW
Personel Number		4 Persons

This product's technical characteristic is designed in accordance with Gisaş Shipbuilding Industry's operation profile. The technical configuration of ZEETUG may vary according to project requirements / operation profile.

ZEETUG®
Zero Emission Electric Tug Boat

CLIMATE CHANGE, ENVIRONMENTAL & PUBLIC HEALTH BENEFITS

	CO_2 SAVED		NO_x SAVED	
GİSAŞ POWER (ZEETUG30)	TOTAL	954.8 t	TOTAL	2.7 t
	PER ANNUM	215.4 t	PER ANNUM	0.6 t
GİSAŞ POWER II (ZEETUG30)	TOTAL	168.7 t	TOTAL	0.48 t
	PER ANNUM	123.1 t	PER ANNUM	0.35 t
GİSAŞ POWER III (ZEETUG30)	TOTAL	196.3 t	TOTAL	0.55 t
	PER ANNUM	169.0 t	PER ANNUM	0.48 t
GİSAŞ POWER IV (ZEETUG45)	TOTAL	142.8 t	TOTAL	0.40 t
	PER ANNUM	162.8 t	PER ANNUM	0.46 t

Significantly reduced
Marine Noise
POLLUTION

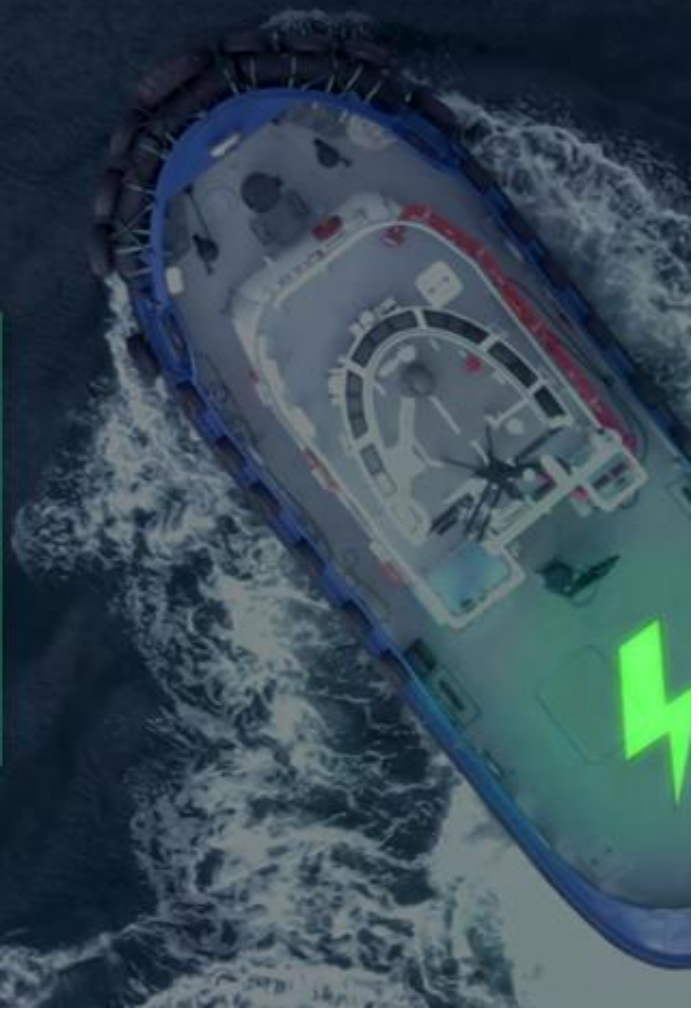
ZERO $PM_{10\&2,5}$
POLLUTION

ZEETUG®
Zero Emission Electric Tug Boat

ECONOMIC BENEFITS

OPEX
SAVINGS

TOTAL FUEL COST (ENERGY)	TOTAL MAINTENANCE & REPAIR COST
30 %	**85 %**
(MDO vs Electric)	(MDO vs Electric) (approx. 1 to 5)



QCS (QUICK CHARGE STATION)

- A quick-charging solution, preferably around 1 hour.
- Accordance with the existing electrical infrastructure.
- ISU (IGBT supply unit) designed to not start up before the charging plug is connected properly.
- Tailored for the client and the projects needs/requirements.

GENERAL SPECIFICATIONS

Input	3- phase 500VAC ±10% ; 50-60Hz ±%5
Output	750Vdc
Efficiency	>96%
Power factor	0.99
Output power up to	2x500 KW
Protection degree	IP54 Cabinets for indoor use
Ambient temperature	0°C to 40°C
Ambient humidity	0% to 95%
Heating/Cooling is controlled	by A/C inside container
Dimensions (W x D x H)	1500 x 650 x 2250 mm

CHARGING TECHNOLOGY

Swich board	ABB
Cooling system	Air cooling
Optimizing	Boosting input voltage according to set output voltage, active power control and limit functions
Human machine interface	Hand terminal used as HMI, actual readings of power, voltage, current, temperature, ect.
Energy import	Energy import is recorded for each charging cycle in kWh

CONNECTORS

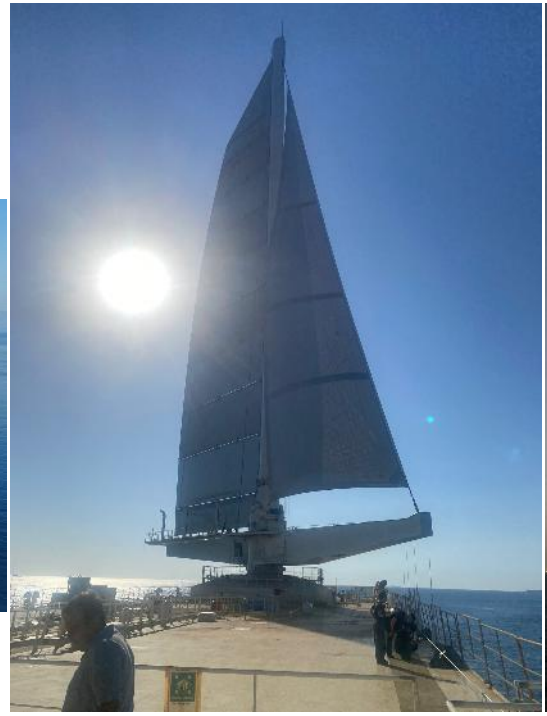
Marechal DS4 1000 V

BATTERY OPERATION RANGE

%20-%90 SOC for ZEETUG NV712 : 995 KWH, 55-65min

Innovation Example: Neoliner

- Newbuild sailing roro ship
- Designed to cross Atlantic with 5300 DWT Cargo



THANK YOU FOR YOUR ATTENTION