

LILA

GLOBAL

MARINE MONEY

**DUBAI
6 MARCH 2024**



OVERVIEW

41

VESSELS

174

FIXTURES

959

PORT CALLS

3.6M

MT CARGO MOVED

86,322_{MT}

BUNKERS CONSUMED

\$52.95_M

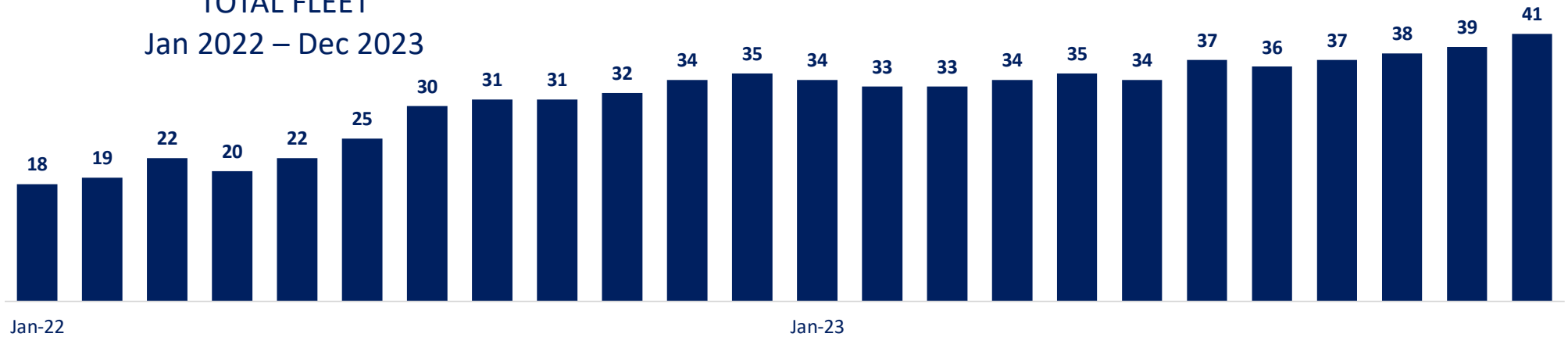
BUNKER SPEND

	2022	2023
FLEET SIZE	35	41
PORT CALLS	761	959
FIXTURES	86	174
CARGO TRANSPORTED	1.2M mt	3.6M mt
BUNKERS CONSUMED	61,558	86,322
BUNKER SPEND	\$ 50.17M	\$ 52.95M



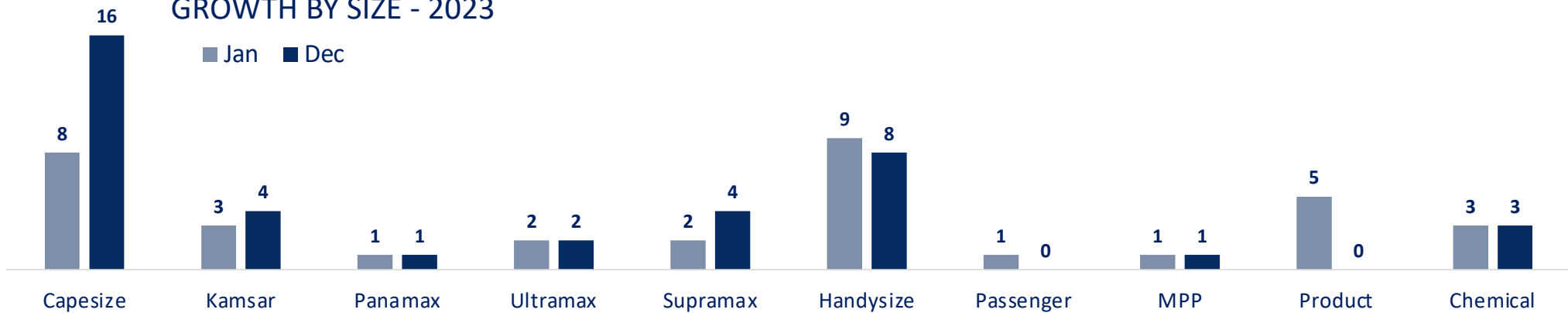
FLEET RECAP

TOTAL FLEET
Jan 2022 – Dec 2023



GROWTH BY SIZE - 2023

■ Jan ■ Dec



FINANCIAL POSITION

BANKING RELATIONS

9

LOAN TO VALUE/LEVERAGE

31%



DECARBONIZATION GOALS

1

Efficiencies

We are looking at Efficiencies in the form of air lubrication, wind tech, trim optimization software etc.

2

Fuel & Emission

- Alternate Fuel Solutions such as LNG, Methanol, Ammonia, Hydrogen, etc.
- Instruments for Emission measurements

3

Vessel Suitability

We consider the suitability of every vessel for adopting technologies for decarbonization & saving cost

Role of Recycling

Recycling carbon-intensive tonnage is a key part of the equation to keep the world fleet balanced.

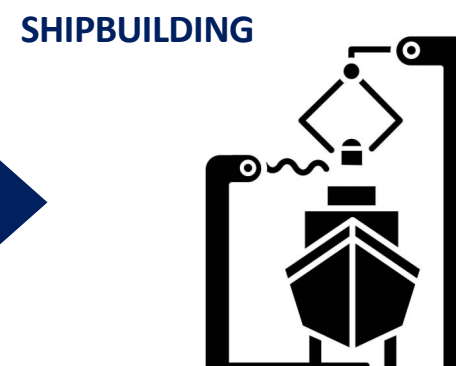
Recycling at the right time will play a vital role in decarbonization in shipping

If the purpose of **EEXI and CII** is to save environment, phasing out the ships of a certain age or vintage vessels would be **counter-productive as the replacement tonnage would cause greater environmental damage during newbuilding process.**



NEWBUILDING & IMPACT ON DECARBONIZATION

Large percentage of the existing fleet of bulker and VLCC vessels will not meet IMO's regulation i.e., EEXI & CII and they are most likely to be phased out. This would lead to the replacement of phased out tonnage & new building. New building requires steel and, production of steel consumes a significant amount of energy leading to huge amount of GHG emissions.



- In 2018, each ton of steel emitted 1.85 tons of CO₂, constituting about 8% of global emissions.
- Raw steel production via basic oxygen furnaces (BOF) requires about 24.5×10^9 Joules per ton.
- Approximately 770 kgs of coal are needed to produce one ton of steel, with BOF representing roughly 70% of global steel production.
- A 20,000 MT ship's construction necessitates about 15.4 million tons of coal and emits 37,000 tons of CO₂.
- VOC emissions during newbuilding, primarily from painting, amount to approximately 173.51 tons for a ship of this size.



ALTERNATE FUELS

Newbuilding Ships and LNG Usage

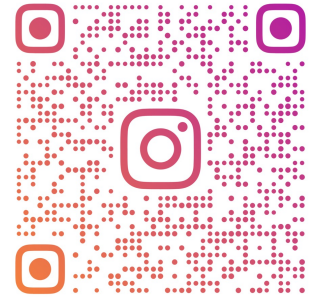
- New ships often opt for dual fuel systems, with LNG gaining popularity.
- LNG can notably cut emissions, typically by 8–20%, but the actual reduction hinges on methane slip from gas engines.
- Despite emission reductions, the LNG production and transportation process still contributes significantly to emissions.

Ship Dismantling Environmental Impact

- Ship dismantling at yards accounts for only 1% of greenhouse gas (GHG) emissions.
- In contrast, re-rolling mills and electric arc furnaces contribute over 90% of GHG emissions.

Life Cycle Assessment of Ships: Implications for Circular Economy in the Shipping Industry

- Stefanos Chatzinkolaou & Nikolaos P. Ventikos studied (name of study as mentioned above) a panamax tanker's Life Cycle Assessment (LCA), focusing on building, operation, and recycling phases
- Ship building comprises 40% of the total impact, with steel production contributing nearly 90% of CO2 emissions
- Newbuildings involve significant energy consumption and GHG emissions, mainly from raw material transportation.
- The study highlights evaluating LCA and material balance for a ship's operational life, promoting circular economy principles in shipping



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THANK YOU

Please contact it@gmsinc.net for further queries.

