

Biofuel Test on Vessel Main Engine

Eastern Pacific Shipping

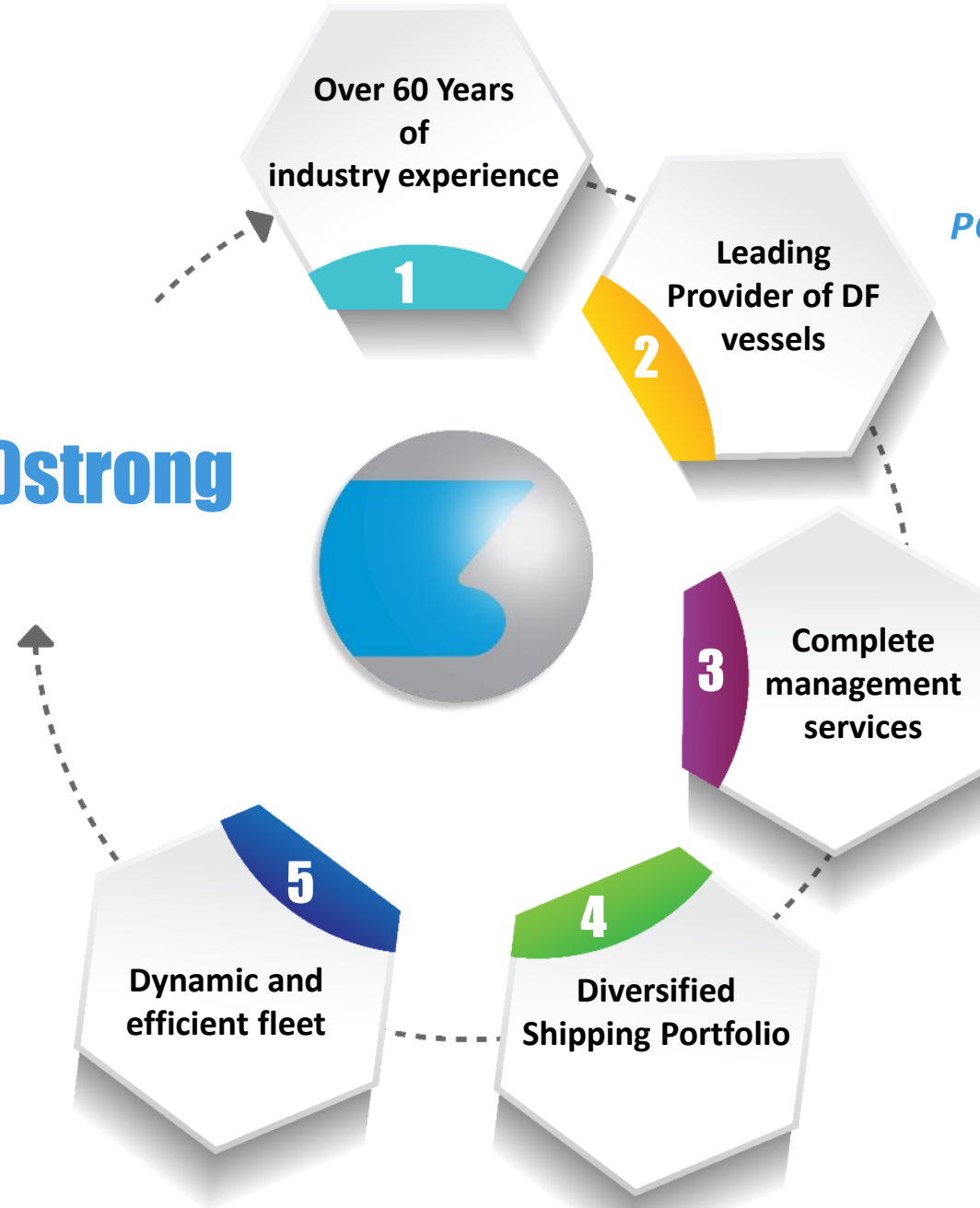


FAST FACTS

All About EPS



#5000strong



POWERED BY
ETHANE
LNG
LPG

The logo for Ethane LNG LPG, featuring a stylized green and blue flower-like shape with five petals.

THE RATIONALE

The driver behind the test and our goals

RATIONALE

EPS is committed towards decarbonisation and environmental preservation investing in alternative marine fuels

HOW

We partnered with GoodFuels Marine to conduct a full test on engines with biofuel made from 100% sustainable waste and residue streams

RESULTS

The results of the trial showed ZERO CO₂ emissions while using biofuel on main engines

PREPARATION & PROCEDURES

1
MIND MAP

2
PREPARE

3
CLEAN

4
SEGREGATE

Before
Biofuel
Bunkering

APPROVALS & GUIDANCE

For the usage of biofuels

01

FLAG STATE APPROVAL



MPA approval provided basis MARPOL ANNEX VI regulation 4.2 (equivalent fuels) for the vessel's main propulsion engine to carry out trials using biofuel.

02

CLASS APPROVAL

ABS

ABS Approvals were based on Flag State approvals

03

MAIN ENGINE MAKERS



Guidance

COMPARISON OF FUELS

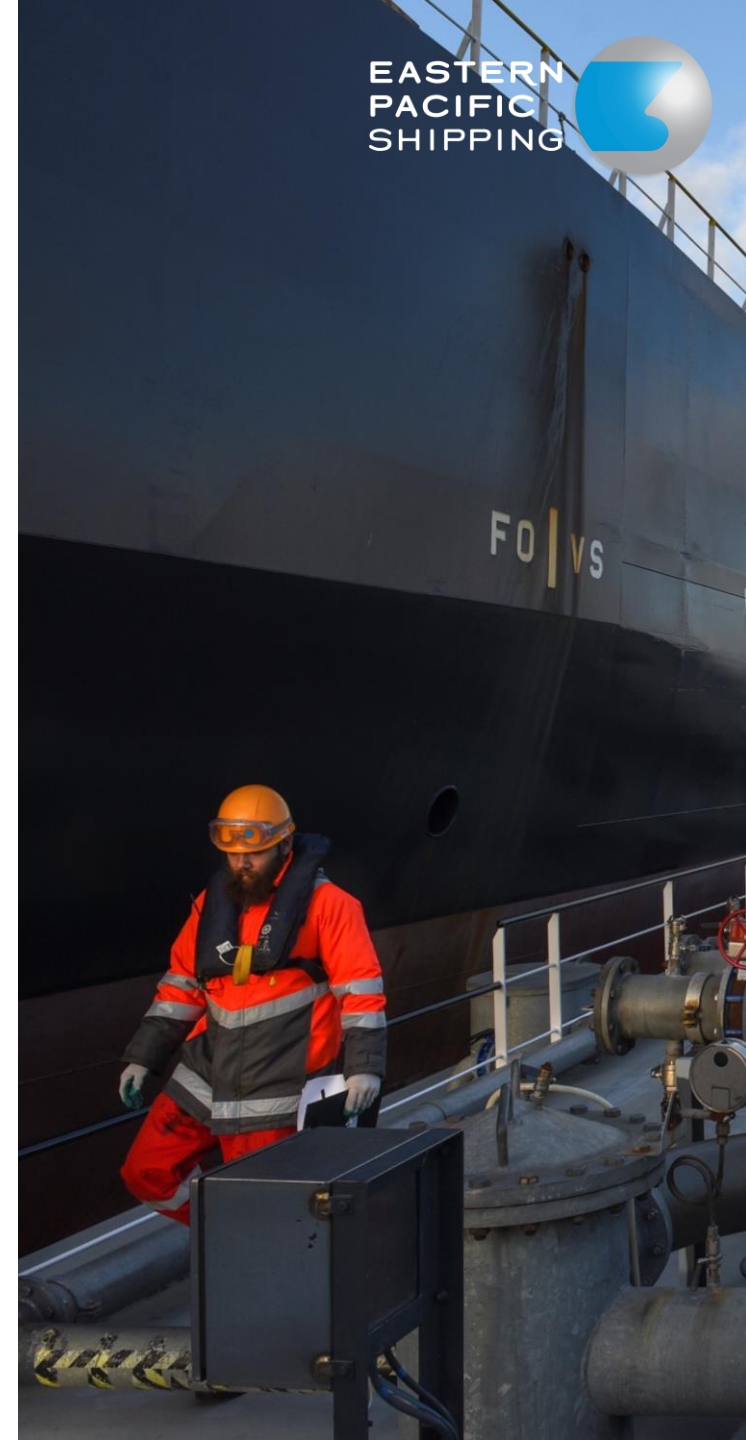
General Specifications

VLSFO		Biofuel	
✓ Density @ 15°C	: 940.3 kg/m ³	✓ Density @ 15°C	: 921.3 kg/m ³
✓ Viscosity @ 50°C	: 98.3 cST	✓ Viscosity @ 50°C	: 16.6 cST
✓ Sulphur (Max.)	: 0.5 % (m/m)	✓ Sulphur	: 0.04 % (m/m)
✓ Pour point	: 18°C	✓ Pour point	: 12 °C
✓ Calorific Value	: 42.1 MJ/kg	✓ Calorific Value	: 35-42 MJ/kg

Specifications in Actual Test Environment

VLSFO		Biofuel	
• <u>MCR Power: 8580 KW</u>		• <u>MCR Power: 8580 KW</u>	
➤ Rpm: 108.1		➤ Rpm: 108.2	
➤ Speed: 12.5 Knots		➤ Speed: 12.5 knots	
➤ Slip: 15%		➤ Slip: 15 ~19 %	
➤ Load: 58.8%		➤ Load: 58.4 %	
➤ Power: 5045 KW		➤ Power: 5015 KW	
➤ Good weather Daily FOC: 22 MT/day		➤ Good weather Daily FOC: 24.4 MT/day	

The Calorific Value of biofuel is up to 10% lower when compared with VLSFO



BIOFUEL



A DEEPER DIVE

Vessel DWT	47,377 MT
Cargo Carried	41,076 MT
GHG Rating	A



All impact reports for CO₂ emissions are certified by the International Sustainability & Carbon Certification (ISCC)

VLSFO

AER

5.09g CO₂/t Nm

EEOI

5.88g CO₂/t Nm

Biofuel

AER

0.0g CO₂/t Nm

EEOI

0.0g CO₂/t Nm

for main engine only

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CONCLUSIONS

Benefits of biofuels

01

Daily Savings

68.51 MT of CO₂-eq



02

Good Alternative

marine fuel for vessels



03

Emissions Reduction

when used in all areas



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