

50,000 DWT OIL AND CHEMICAL TANKER

IMOFlexMAX

REDUCING GREENHOUSE GAS EMISSIONS
BY MORE THAN 25%



First Class Seaborne Solutions



Stena Bulk

INNOVATION & PERFORMANCE

THE IMOFLEXMAX STORY



The IMOFlexMAX tankers represent the most sophisticated vessels in the Stena Bulk fleet.

IMOFlexMAX is the next-generation product and chemical tanker, designed by Stena Bulk to meet the current and future needs of liquid bulk shipping. It is a further development of our current IMOII MAX design: best in class in terms of performance and design.

Our IMOFlexMAX design is based on two major objectives - flexibility and efficiency.

For us, flexibility means the ability to transport a wide range of products and cargo sizes anywhere in the world.

IMOFlexMAX will lead the way towards a sustainable future as one of the most energy efficient products and chemicals tankers on the market. It has been designed by world-class naval architects at sister company Stena Teknik and is based on 40 years of tanker shipping experience. From hull design to vessel propulsion, these ships will incorporate the latest technology, setting a new standard for the global tanker industry. The vessels will be equipped with Flettner rotors and solar panels to harvest energy from wind and sunlight. They will be powered by efficient dual-fuel engines that can run on LNG as well as conventional low-sulfur fuels using today's newest technology, but they will also open the way for further

development of alternatives with consideration to trade lanes and customers' expectations.

The basic IMOFlexMAX concept will allow us to dramatically reduce local SOX, NOX and particle emissions as well as greenhouse gas emissions. With the combined fuel and energy efficiencies, we will be able to reduce greenhouse gases with at least 25% with a potential to reach up to 45% compared to modern product tankers run by low-sulfur fuel oil.

The world's need for reliable, innovative and sustainable transportation of liquid products is increasing and will continue to do so as the world's population grows and global living standards improve. With IMOFlexMAX vessels, built with existing and proven technology, Stena Bulk is taking a major step forward in bringing shipping in compliance with the Paris Agreement and the UN Sustainability and Development Goals.

The vessels are designed, with several large tank sets combined with smaller tank sets in order to fulfill our customers' demands.



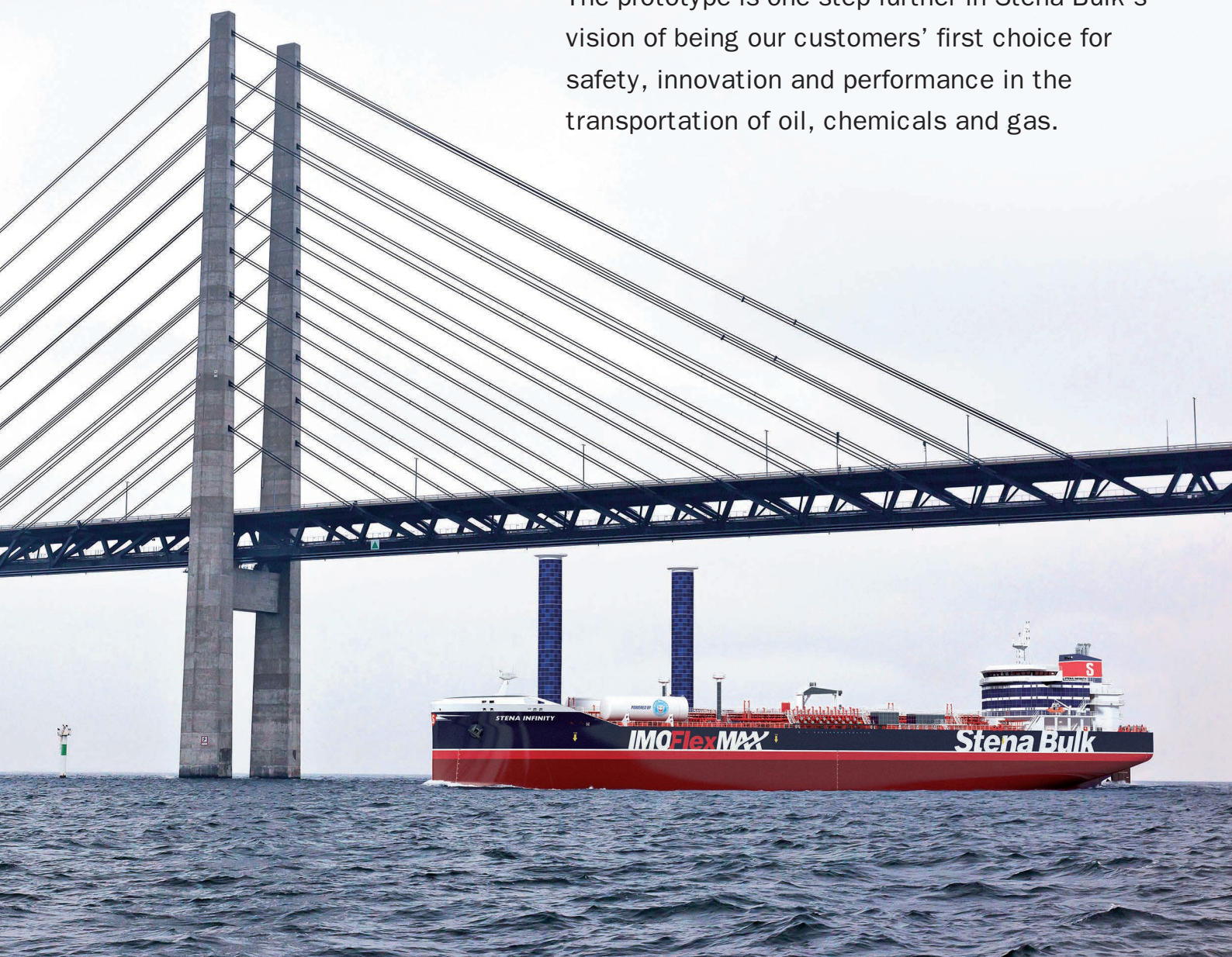
Our innovative designs gives us the flexibility to carry smaller lots of chemicals and soft oils. Fitting the vessel with one stainless-steel tank set with two segregations enables us to load one or two parcels of high-end chemicals in providing our customers with flexible cargo solutions.

**ESTIMATED REDUCTION OF
GREENHOUSE GAS EMISSIONS:**

| | |
|-----------------------------|-------------|
| Enhanced hull design | 10% |
| Flettner rotors | 12% |
| Dual-fuel LNG propulsion | 15% |
| Main engine shaft generator | 2% |
| Solar panels | 0.5% |
| ESS battery | 0.5% |

The IMOFlexMAX vessels will be deployed in Stena Bulk's global logistics system together with IMOIIIMAX. IMOFlexMAX will be an important asset in Stena Bulk as well as for its partners, while strengthening our position as the market-leading, cross-trading specialists in the MR segment with increased efficiency and reduction of greenhouse gases.

The prototype is one step further in Stena Bulk's vision of being our customers' first choice for safety, innovation and performance in the transportation of oil, chemicals and gas.



OPTIMIZED DESIGN FOR FLEXIBLE EDIBLE OILS OPERATION AND CARGO FLOW

After a large number of tank towing tests and extensive development, Stena Bulk together with Stena Teknik has succeeded in creating a design that is probably the most efficient eco MR tanker in the world. Completely new and revolutionary hull lines together with a dual-fuel engine, shaft generator, Flettner rotors, optimized propeller and rudders have reduced overall energy consumption to a minimum.



AERODYNAMIC DESIGN

In heavy weather, wind resistance can be significant. With smart design, IMOFlexMAX benefits from less wind resistance than other similar vessels.

SHIP PERFORMANCE SYSTEM

IMOFlexMAX is equipped with a ship performance system for better and more efficient onboard control of systems, resulting in energy savings and reduced environmental impact. Collecting onboard data enables live performance monitoring and real-time feedback to commercial operations through the Orbit platform.

DUAL-FUEL ENGINE

The highly efficient main engine represents the latest technical development for dual-fuel technology with LNG and fuel oil. The two-stroke, high-pressure DF engine has negligible methane slip and, when run on LNG, dramatically reduces local pollutants such as NOX, SOX and particles.

MAIN ENGINE SHAFT GENERATOR

The robust, cost-efficient main engine shaft generator provide all the electric power for a normal sea load, allowing all the gen-sets to be shut-down under normal sea-going conditions. Consequently, fuel consumption is decreased by 2% and maintenance costs for the gen-sets are reduced.

AUXILIARY ENGINES PART-LOAD OPTIMIZED

Normally auxiliary engines are fuel optimized for high load operation rather than part-load operation. Part-load operations are representing a higher percentage of normal operations. For IMOFlexMAX, the new auxiliary engines have been part-load optimized, thus improving overall performance and reducing fuel consumption.

TANK CONFIGURATION

IMOFlexMAX is designed with several large tank sets combined with smaller tank sets in order to fulfill our customers' demands. This gives the vessel a competitive edge with quick turnarounds in ports while also having the flexibility of a combination of smaller and larger tanks. The vessel is equipped with six sets of cargo tanks and two slop tanks with a total of ten segregations. Our innovative design provides the flexibility to carry smaller lots of chemicals, products, soft oils or a large single-grade cargo. Fitting the vessel with one stainless-steel tank set with two segregations will allow us to load one or two parcels of high-end chemicals.

STAINLESS-STEEL TANK SET

One tank set of stainless-steel tanks with two segregations will allow us to load one or two parcels of high-end chemicals.

STAINLESS-STEEL CARGO PIPING

Instead of simpler, coated, mild steel piping with flanged couplings the cargo piping for IMOFlexMAX is of stainless steel in order to comply with FOSFA recommendations and chemical trade demands.

TWO OIL-FIRED BOILERS AND ONE EXHAUST GAS COMPOSITE BOILER

Two oil-fired boilers provide for flexibility and redundancy, which is of particular advantage when carrying heated cargoes. In many instances, only part-steam heating capacity is required. In such cases, both boilers can be run efficiently instead of having only one large boiler operating at non-preferable conditions.

The vessel is also equipped with an exhaust gas multi-inlet composite boiler as one of the very first installations. This boiler not only recovers energy from the main engine's exhaust gas but also recovers the exhaust gas energy from two of the auxiliary engines.

In addition, the boiler has an oil-fired section providing for adapted steam production to meet the vessel's domestic steam demands without the need to run the larger oil-fired boilers.

ADVANCED POLYMER CARGO TANK COATING ENSURES EFFICIENT AND FLEXIBLE CARRIAGE OF CARGOES, INCLUDING METHANOL

Advanced polymer coating ensures that the charterer will have full flexibility to carry an extensive spectrum of petroleum products and chemicals with higher flexibility, capacity and durability than most competitors in this tanker segment.

| TRADED CHEMICAL PRODUCTS | ADVANCED POLYMER COATING | EPOXY COATING | STAINLESS STEEL |
|--------------------------|--------------------------|---------------|-----------------|
| Methanol | ✓ | ✗ | ✓ |
| Para-xylene | ✓ | ✓ | ✓ |
| Ethylene glycol | ✓ | ✗ | ✓ |
| Styrene | ✓ | ✗ | ✓ |
| Ethanol | ✓ | ✓ | ✓ |
| Benzene | ✓ | ✓ | ✓ |
| Mixed xylenes | ✓ | ✓ | ✓ |
| Caustic | ✓ | ✓ | ✓ |
| Sulphuric acid | ✗ | ✗ | ✓ |
| Phosphoric acid | ✗ | ✗ | ✓ |
| Acetic anhydride | ✗ | ✗ | ✓ |
| Acrylonitrile | ✓ | ✗ | ✓ |
| Phenylacetic acid | ✗ | ✗ | ✓ |
| Acetic acid | ✗ | ✗ | ✓ |
| Propylene oxide | ✗ | ✗ | ✓ |
| Butyraldehyde | ✗ | ✗ | ✓ |
| Methyl methacrylate | ✗ | ✗ | ✓ |



NITROGEN INERT GAS SYSTEM (INSTEAD OF IG GENERATOR/FLUE GAS SYSTEM)

Clean nitrogen instead of traditional inert flue gas decreases the time between discharge and loading due to faster tank cleaning. No need of portable nitrogen tubes for purging and/or cargo tank padding. From a fuel efficiency point of view, inert gas generation by means of a nitrogen generator is also more fuel efficient compared to a traditional inert gas generator.

CARGO PUMP SYSTEM

The deep-well hydraulic FRAMO cargo pump system provides full flexibility so that all cargo pumps can be run and controlled individually, at the same time. Consequently, high cargo discharge capacity is provided along with a high degree of flexibility of cargo circulation.

EFFECTIVE TANK CLEANING

The tank cleaning system enables four tanks to be washed simultaneously with heated as well as cold sea and fresh water. Fulfilling Lloyd's Register voluntary class notation Effective Tank Cleaning, there is an arrangement of the tank cleaning machines to minimize the shadow areas, which maximizes efficient tank cleaning operations thus minimizing the time between discharge and loading.

SPRAY HOOD

The forecastle sprayhood helps protect the mooring equipment from green water and provides for improved aerodynamics.

ESS BATTERY

A 500 kWh ESS (Energy Storage System) battery helps reduce maintenance costs and also improves fuel savings. In combination, we achieve a cost-saving effect of about 0.5%.

SOLAR PANELS

1000 m² solar panels provide for 0.5% fuel savings.

FLETTNER ROTORS

Two efficient Flettner rotors harness wind energy and help reduce the annual fuel consumption by 12% for worldwide trading. With the tilting mechanism, the ship's air draught is not compromised.

IMOFlexMAX

MAIN PARTICULARS

| | |
|----------------|--|
| Class notation | DNVGL +1A Tanker for Oil Products ESP and Tanker for Chemicals ESP, CSR, E0, LFL fueled, ETC, LCS, RECYCLABLE, Clean, TMON (oil-lubricated), BWB (T), VCS (2), BIS, COAT-PSPC(B), SPM Register information: Ship type 2, a2, b3, c3, v3, f2, str0.075, k, ssp |
| Flag | Cyprus |

PRINCIPAL DIMENSIONS

| | |
|-------------------------------|-----------------------|
| Length, overall | 185 m |
| Length between perpendiculars | 178.5 m |
| Breadth, molded | 32.26 m |
| Depth, molded | 18.35 m |
| Design draft molded | 11.0 m |
| Scantling draft molded | 13.0 m |
| Deadweight, design | 40,000 tons |
| Deadweight, scantling | 49,900 tons |
| Cargo volume (100%) | 54,000 m ³ |

MACHINERY

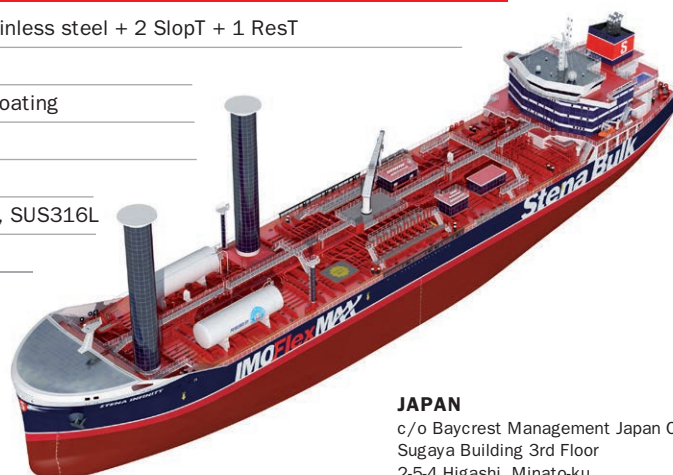
| | |
|--|---------------------------------|
| Main engine | MAN6G50ME-GI |
| Auxiliary generators | 2 x 1,500 kW |
| ESS (Energy Storage System) | 500 kWh |
| Design speed | 13 kn |
| Propulsion fuel oil consumption, service | 14 mt/day |
| Boilers | Two auxiliary and one composite |

BUNKERS AND WB

| | |
|-----------|----------------------|
| LNG-tanks | 2x800 m ³ |
| VLSFO | 1000 m ³ |
| MGO | 120 m ³ |

CARGO ARRANGEMENTS

| | |
|----------------------------|---|
| Cargo tanks | 10 COT + 2 COT stainless steel + 2 SlopT + 1 ResT |
| Segregations, double valve | 8+2+1 |
| Tank coating | Advanced polymer coating |
| Cargo pumps (deep-well) | 14 x 375 m ³ /h |
| Tank cleaning | 42 Fixed nozzle |
| Tank heating | Steam heating coils, SUS316L |
| Level gauging | Radar type |



JAPAN

c/o Baycrest Management Japan Co Ltd
Sugaya Building 3rd Floor
2-5-4 Higashi, Minato-ku
Tokyo 105-0021, Japan
Tel +81 3 64 52 87 55

GOTHENBURG

Masthuggskajen,
SE-405 19 Gothenburg
Sweden
Tel +46 31 85 50 00

HOUSTON

2727 Allen Parkway
Suite 760
Houston TX 77019, USA
Tel +1 713 874 59 60

COPENHAGEN

Tuborg Boulevard 12
DK-2900 Hellerup
Denmark
Tel +45 88 93 86 00

DUBAI

Almas Tower, Floor 22
Jumeirah Lake Towers
Dubai, UAE
Tel +971 444 31 901

SINGAPORE

#44-01 Suntec Tower 4
6 Temasek Boulevard
Singapore, 038 986
Tel +65 6336 5953

SHANGHAI

Stena Marine Shanghai
Room 1606, United Plaza
1468 West Nanjing Road
Jingan District, Shanghai 200040
P.R. China
Tel +65 6336 5953

For more information about Stena Bulk, please visit:

www.stenabulk.com or info@stenabulk.com