

# Isle of Man Ship Registry Manx Shipping Notice

## MARPOL Annex VI

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### **1. Introduction**

MARPOL Annex VI has been written to prevent air pollution from emissions from ships. It entered into force internationally in 2005 and has been revised several times since; a complete revision of the annex text entered into force on 1 November 2022. MARPOL Annex VI is currently applied by the Merchant Shipping (MARPOL Annex VI – Prevention of Air Pollution) Order 2014.

### **2. Application**

The Merchant Shipping (MARPOL Annex VI – Prevention of Air Pollution) Order 2014 applies to:

- All Manx ships
- Foreign ships in the territorial waters of the Island, and
- Fixed or floating platforms engaged in exploration and exploitation of the sea-bed and subsoil within the territorial waters of the Island

The Order excludes ships that are a warship, naval auxiliary or other ship owned or operated by a State and used, for the time being, only on government, non-commercial service.

The Order also applies to suppliers of fuel oil who are based in the Isle of Man. Please note that there is a separate MSN which explains the requirements for fuel oil suppliers ([MSN 049](#)).

Although the Order applies to all Manx ships, certain sections are disapplied depending upon the tonnage or type of ships or engine power. For instance, the requirement for survey and certification with an International Air Pollution Prevention Certificate or International Energy Efficiency Certificate only applies to vessels of 400gt or above. The requirement for an Engine International Air Pollution Prevention certificate applies to engines on all ships with a power output of more than 130kW.

### **3. Survey & Certification**

All MARPOL Annex VI surveys, approvals and issuance of certificates are currently delegated to the Recognised Organisations (ROs) stated in [MSN 020](#).

The Ship Registry permits certain aspects of MARPOL Annex VI certification, verification and approvals to be undertaken by any RO other than the vessel's primary RO, subject to certain conditions. See [TAN 007-22](#) for more information.

#### **3.1 Surveys**

The following ships are required to be surveyed under MARPOL Annex VI:



- Every ship of 400gt and above, and
- Every fixed or floating platform

Renewal surveys shall be undertaken at intervals not exceeding 5 years except where otherwise permitted by regulation 9.2, 9.5, 9.6 or 9.7 of MARPOL Annex VI.

### **3.2 International Air Pollution Prevention Certificate (IAPP)**

An IAPP Certificate is required for:

- Any ship of 400 gross tonnage and above in voyages to ports or offshore terminals under the jurisdiction of other Parties; and
- Platforms and drilling rigs engaged in voyages to waters under the sovereignty or jurisdiction of other Parties.

An IAPP Certificate issued on behalf of the Isle of Man shall be valid for a period not exceeding 5 years.

Regulation 9.7 of MARPOL Annex VI states that, in special circumstances, a new IAPP certificate need not be dated 5 years from the date of expiry of the existing IAPP, but may be issued for a period not exceeding five years from the date of renewal survey completion. The Ship Registry has deemed Special Circumstances to be:

- a) Where it would appear to be appropriate to alter the start date in order to harmonize the IAPP Certificate with other certificates, or
- b) Where the owner of the ship requests the change of date; and
- c) Satisfies the Ship Registry that the owner has a justified reason for making the request; and
- d) Complies with any additional survey requirements which the Ship Registry may impose.

Examples of having a 'justified reason' might include:

- a) Where the ship has been laid up for an extended period, or
- b) Where the nature of a ship's business would make a different date more convenient (such as is in the case of a vessel constructed in the summer and whose main trade is in the summer)

In the case of a request to change the anniversary date for the sake of convenience, the request will only be considered if such a request has not been made before for the ship in question, and the owner confirms in writing that this is a one off request for that ship.

### **3.3 International Energy Efficiency Certificate (IEEC)**

An International Energy Efficiency Certificate is required for all ships to which Chapter 4 of MARPOL Annex VI applies. In general this is all ships which are over 400gt which are propelled by mechanical means. Platforms such as FPSOs, FSUs and drilling rigs are excluded, regardless of their propulsion, as are cargo ships with ice-breaking capability.

For applicable ships, the IEEC must be reissued to include the attained/required EEXI at the first annual, intermediate or renewal survey after 1 January 2023.



### **3.4 Engine International Air Pollution Prevention Certificate (EIAPP)**

Regulation 13 (Nitrogen Oxides) requires each marine diesel engine with a power output of more than 130 kW to be certificated with an Engine International Air Pollution Prevention Certificate (EIAPP).

However, this does not apply to a marine diesel engine intended to be used solely for emergencies, or solely to power any device or equipment intended to be used solely for emergencies on the ship on which it is installed, or a marine diesel engine installed in lifeboats intended to be used solely for emergencies.

### **3.5 Statement of Compliance – Fuel Oil consumption reporting and operational carbon intensity rating (Regulation 6.6)**

Regulation 27 of MARPOL Annex VI (Collection and Reporting of Ship Fuel Oil Consumption Data) requires each ship of 5,000gt and above to collect and report data to IMO in respect of fuel oil consumption. Ships not propelled by mechanical means, and platforms including FPSOs, FSUs and drilling rigs are exempt from this regulation.

Under this regulation, ships are required to have a ship specific 'SEEMP Part II' which must be approved by an RO taking into account the guidelines in MEPC.346(78). Ships must then report their annualised fuel consumption to their RO by the 31<sup>st</sup> March each year. The RO will then verify the data and submit this to IMO's Fuel Oil Consumption Database in GISIS. Verification shall take place in accordance with the IMO Guidelines in MEPC.348(78).

Regulation 28 of MARPOL Annex VI (Operational Carbon Intensity) applies to each ship of 5,000gt and above and falling into one of the following categories: bulk carrier, combination carrier, containership, cruise passenger ship, gas carrier, general cargo ship, LNG carrier, refrigerated cargo carrier, ro-ro cargo ship, ro-ro cargo ship (vehicle carrier), ro-ro passenger ship, and tanker. This regulation requires applicable ships to calculate their attained annual operational CII over a 12-month period starting from 1 January 2022, taking into account the guidelines within MEPC.352(78).

Within three months of the end of each calendar year (i.e. by 31<sup>st</sup> March), ships shall report their data to the RO responsible for verification of the attained annual operational CII. The attained annual operational CII shall then be documented and verified against the required annual operational CII to determine an operational CII rating from 'A' to 'E' indicating a major superior, minor superior, moderate, minor inferior or major inferior performance.

By the 31<sup>st</sup> May each year, a ship should be issued with a 'Statement of Compliance – Fuel Oil Consumption Reporting and Operational Carbon Intensity' for the previous calendar year, issued on behalf of the Isle of Man Government. The Statements of Compliance from previous years should be retained onboard for the life of the vessel.

A ship with an Attained CII of D for three consecutive years or rated as E for one year shall not be issued a Statement of Compliance unless a plan of corrective actions is duly developed and reflected in the SEEMP Part III and verified by the relevant RO.



## **4. Required Documents**

### **4.1 Ozone Depleting Substances Record Book (Regulation 12.6)**

Each ship that is required to be certificated with an IAPP (see section 3.2) and has installed rechargeable systems that contain ozone-depleting substances shall maintain an ozone-depleting substances record book.

A Company designated 'MARPOL Annex VI Record Book' may be used to satisfy the requirement for an Ozone Depleting Substance Record Book.

Where the Ozone Depleting Substances Record Book is in electronic format, it must comply with the requirements within [TAN 008-20](#). If not electronic, there is no requirement for this book to be approved.

### **4.2 NOx Tier & On/Off Status Record Book (Regulation 13.5.3)**

Regulation 13.5.3 requires that the tier and on/off status of marine diesel engines installed on board a ship to which paragraph 5.1 of MARPOL Annex VI applies which are certified to both Tier II and Tier III or which are certified to Tier II only shall be recorded in a logbook.

This may be in any format provided that it contains the following entries and information:

- date, time and position of the ship when entering and exiting a NOx Tier III area; and
- when the on/off status of the above engines changes within a NOx Tier III area – include the date/time and position of the ship.

This record book may be incorporated into another document e.g. a Company MARPOL Annex VI Record Book or Engine Room Log Book.

Where the NOx Tier & On/Off Status Record Book is in electronic format, it must comply with the requirements within [TAN 008-20](#).

### **4.3 SECA Fuel Changeover Procedure & Record Book (Regulation 14.6)**

Ships using separate fuel oils to comply with SECA regulations and entering or leaving an emission control area are required to carry a written procedure showing how the fuel oil changeover is to be completed. This procedure must allow sufficient time for the fuel oil service system to be fully flushed of all fuel oils exceeding the applicable sulphur content prior to entry into an emission control area.

The volume of low sulphur fuel oils in each tank as well as the date, time and position of the ship when any fuel oil changeover operation is completed prior to the entry into the SECA or commenced after exit shall be recorded in such log book as prescribed by the Administration.

The Ship Registry has determined the following options to be acceptable to meet this requirement:

- 1) the engine room log book;
- 2) a SECA Fuel Change-Over and Bunker Sample Record Book;
- 3) the Oil Record Book Part I; or



- 4) a company designed 'MARPOL Annex VI Record Book' which must have, as a minimum the following 5 sections:
- Section 1 to record the tracking and control for the representative fuel oil samples;
  - Section 2 to document any necessary custody transfer of the representative fuel oil sample;
  - Section 3 to record the receipt and storage of low sulphur fuel oil. This does not replace the record of bunkering operations in the Oil Record Book Part I, as required by MARPOL Annex I;
  - Section 4 to record the changeover for low sulphur fuel operation;
  - Section 5 to record operations related to ozone depleting substances.

All entries into any of the options listed above should identify the person making the record, the date and time of recording, the position of vessel and evidence of review and endorsement by the Chief Engineer or Master as appropriate.

Where this Record Book is in electronic format, it must comply with the requirements within [TAN 008-20](#).

#### **4.4 VOC Management Plan (Regulation 15.6)**

All tankers carrying crude oil shall have onboard and implement a VOC management plan which shall be approved by an RO taking into account the guidelines within MEPC.185(59). Reference should also be made to the technical information on systems and operations to assist development of VOC management plans (MEPC.1/Circ.680) and technical information on a vapour pressure control system to facilitate the development and update of VOC management plans (MEPC.1/Circ.719).

#### **4.5 Manufacturers Operating Manual for Incinerator (Regulation 16.7)**

Where an incinerator is installed on a ship, it shall be provided with a manufacturer's operating manual which is to be retained with the unit and which shall specify how to operate the incinerator within the limits specified in Appendix IV to MARPOL Annex VI.

#### **4.6 Bunker Delivery Notes (Regulation 18.5)**

Each ship that is subject to the survey and certification requirements of MARPOL Annex VI, shall record details of fuel oil delivered and used on board for combustion purposes by means of a bunker delivery note. This shall be in the form prescribed in appendix V for MARPOL Annex VI and may be in electronic form. An electronic bunker delivery note should be protected from edits, modifications or revisions and authentication be possible by a verification method such as a tracking number, watermark, date and time stamp, QR code, GPS coordinates or other verification methods.

The bunker delivery notes shall be kept on board the ship for a minimum period of three years after the fuel oil has been delivered on board.



#### **4.7 EEDI (Energy Efficiency Design Index) Technical File (Regulation 22)**

Each ship constructed on or after 1.1.13 (or constructed prior to this date that has undergone a major conversion on or after this date) to which Regulation 22. of Annex VI applies shall carry on board details of their attained EEDI (specific to each ship) and shall be accompanied by an EEDI technical file which contains the information necessary for the calculation of the attained EEDI and the process of that calculation.

The attained EEDI shall be verified by a Recognised Organisation, taking into account the 2018 Guidelines in MEPC.308(73) as amended by MEPC.322(74) and MEPC.332(76).

#### **4.8 EEXI (Energy Efficiency Existing Ship Index) Technical File (Regulation 23)**

Each ship to which Regulation 23 of Annex VI applies shall carry on board details of their attained EEXI (specific to each ship) and shall be accompanied by an EEXI technical file that contains the information necessary for the calculation of the attained EEXI and the process of that calculation. This must be verified by an RO during the ship's first annual, intermediate or renewal survey after 1.1.23.

In cases where a ship's attained EEDI already complies with EEXI requirements, an additional EEXI Technical File is not required.

#### **4.9 Ship Energy Efficiency Management Plan (SEEMP) (Regulation 26)**

Each ship to which Chapter 4 of Annex VI applies shall carry on board on a ship specific SEEMP Part I. The purpose of part I of the SEEMP is to establish a mechanism for a company and/or a ship to monitor and improve the energy efficiency of a ship's operation over time. This document is not subject to pre-approval by an RO but will be subject to inspection during survey.

Ships of 5,000gt and above, and to which Chapter 4 of Annex VI applies shall also carry on board a ship specific SEEMP Part II. This is required by Regulation 27 of MARPOL Annex VI and is to enable the collection and reporting of ship fuel oil consumption data and describe the methodology that will be used. The SEEMP Part II must be approved by an RO - a sample 'confirmation of compliance' is contained within MEPC.1/Circ.876 and this should be retained on board the ship.

Ships of 5,000gt and above to which Chapter 4 applies, and falling into the categories of ship stated in Regulation 26.3, shall also carry on board a ship specific SEEMP Part III approved by an RO not later than 1<sup>st</sup> January 2023. The purpose of the SEEMP Part III is to provide information relating to the calculation of the ship's Carbon Intensity Indicator. This shall include:

- A description of the methodology to be used to calculate the attained CII and reporting processes
- The required annual operational CII for the next three years
- An implementation plan to achieve the required annual CII
- A procedure for self-evaluation and improvement

The SEEMP shall be developed taking into account the IMO guidelines within MEPC.346(78). They may form part of the ship's Safety Management System (SMS).



#### **4.10 Technical File (NOx Technical Code, paragraph 2.3.4)**

Every marine diesel engine to which Regulation 13 of MARPOL Annex VI applies shall be provided with a NOx technical file. The technical file must be prepared by the engine manufacturer and approved by an RO. It is required to accompany an engine throughout its life on board the ship.

The technical file must contain, amongst other things:

- Identification of those components, settings and operating values of the engine which influence its NOx emissions including any NOx reducing device or system;
- Identification of the full range of allowable adjustments or alternatives for the components of the engine; and
- a system of on-board NOx verification procedures to verify compliance with the NOx emission limits during on-board verification surveys.

The onboard NOx verification procedure, referred to above, shall be one of the following:

- Engine Parameter Check method
- Simplified Measurement method
- Direct Measurement and Monitoring method

Where the Engine Parameter Check method is used, a Record Book of Engine Parameters shall be maintained (see Section 4.10 of this notice).

A full list of the information required to be included within the Technical File can be found within Regulation 2.4.1 of the NOx Technical Code.

#### **4.11 Record Book of Engine Parameters (NOx Technical Code, paragraph 2.3.7)**

The Record Book of Engine Parameters is required for all marine diesel engines where the Engine Parameter Check method is used as the on board NOx verification procedure (See Section 4.9 of this notice).

The Record Book of Engine Parameters is the document for recording all parameter changes, including components and engine settings, which may influence NOx emission of the engine. This includes regular maintenance work and like-for-like replacement parts.

The Ship Registry is aware that that most Safety Management Systems already require like-for-like replacements to be recorded in the vessel's Planned Maintenance System. Where this is the case (i.e. injectors are changed for identical injectors with the same IMO number) and adjustments made are within the approved ranges, the Ship Registry will accept alternative methods of recording these changes such as in the vessel's computer based planned maintenance system. This acceptance is subject to the following conditions:

- The information is readily available during surveys and inspections
- The record book of engine parameters states where the information can be found and procedures are stated in the vessel's Safety Management System.



- A copy is produced and retained with the Record Book of Engine Parameters when the vessel is sold, changes Technical Manager, or any other reason when the original information will not be retained on the vessel.

## 5. **Emission Control Areas (ECAs)**

There are various ECAs under MARPOL Annex VI. These are as follows:

	<b>NOx</b>	<b>SOx</b>	<b>Particulate Matter</b>
<b>Baltic Sea</b>	Yes*	Yes	No
<b>North Sea</b>	Yes*	Yes	No
<b>North American ECA</b>	Yes**	Yes	Yes
<b>United States Caribbean Sea ECA</b>	Yes**	Yes	Yes
<b>Mediterranean ECA</b>	No	Effective 1.5.25	Effective 1.5.25

Full details of the precise co-ordinates of each ECA can be found on the [IMO website](#).

\*A ship constructed on or after 1 January 2021 and is operating in these emission control areas shall comply with NOX Tier III standards.

\*\*A ship constructed on or after 1 January 2016 and is operating in these emission control areas shall comply with NOX Tier III standards.

For SOx and PM ECAs, the sulphur content of fuel used cannot exceed 0.1% m/m unless an equivalent means of compliant is in use (see section 8.2 of this notice).

## 6. **Waivers, Exemptions & Equivalent Arrangement**

The Ship Registry may permit equivalent arrangements, exemptions and waivers on a case-by-case basis and they will only be valid if they are in writing and if any conditions stated are complied with. Further information on exemptions, equivalent arrangements and waivers are stated in the relevant regulations (Merchant Shipping (MARPOL Annex VI – Prevention of Air Pollution) Order 2014).

It should be noted that waivers, exemptions and equivalences are only issued by the Isle of Man Ship Registry and not by ROs.

There is particular advice for:

- Exhaust Gas Cleaning System equivalences in Section 8.2 of this notice
- NOx exemptions for ships using biofuels or biofuel blends (see [TAN 008-22](#))

## 7. **Nitrogen Oxides (NOx)**

Please see Section 4 of this notice for information on the required documentation relating to NOx.





## **7.1 NOx Technical Code**

The NOx Technical Code applies to all diesel engines with a power output of more than 130 kW which are installed, or are designed and intended for installation, on board any ship subject to which regulation 13 of MARPOL Annex VI applies.

The purpose of the Code is to specify the requirements for the testing, survey and certification of marine diesel engines to ensure they comply with the nitrogen oxides (NOx) emission limits of MARPOL Annex VI.

## **7.2 NOx Tier III Exemption for Recreational Purposes**

Regulation 13.5.2 of MARPOL Annex VI contains certain exemptions from NOx Tier III emissions standards. These exemptions are as follows:

“15.5.2.1 A marine diesel engine installed on a ship with a length (L), as defined in regulation 1.19 of Annex I to the present Convention, of less than 24 metres when it has been specifically designed, and is used solely, for recreational purposes.”

“15.5.2.3 A marine diesel engine installed on a ship constructed prior to 1 January 2021 of less than 500 gross tonnage, with a length (L), as defined in regulation 1.19 of Annex I to the present Convention, of 24 metres or over when it has been specifically designed, and is used solely, for recreational purposes.”

The Ship Registry interprets that ‘recreational purposes’ shall mean a ship intended solely for use in sport of leisure. This includes those ships which are for lease or rent for sport or leisure purposes.

## **8. Sulphur Oxides (SOx)**

### **8.1 Non-Availability of Compliant Fuel**

MARPOL Annex VI requires all fuel used and carried on board ships to have a sulphur content not exceeding 0.5% m/m unless the ship has an equivalent means of compliance. Within Emission Control Areas for SOx (SECAs) the limit is 0.1% m/m sulphur content.

In the event that compliant fuel is not available, please refer to the advice within Section 3 of [TAN 005-19](#).

### **8.2 Exhaust Gas Cleaning Systems (Scrubbers)**

The Ship Registry accepts Exhaust Gas Cleaning Systems (EGCS) as an equivalence under MARPOL Annex VI Regulation 4.1 provided that they are approved by a Recognised Organisation as meeting the relevant IMO guidelines. The Ship Registry has issued specific guidance for on the procedure for Exhaust Gas Cleaning Systems to be recognised as an equivalent arrangement. This can be found within [TAN 010-19](#).

The Ship Registry does not accept averaging SOx emissions from ‘over-performing’ equipment against untreated equipment as the means to comply to the SOx emission limits requirements. The Ship Registry does not interpret this arrangement to cover engine streams where the stack is



not common e.g. a ship with multiple stacks where one stack is treated while another emits higher sulphur.

Where an EGCS Record Book is required and is in electronic format, it must comply with the requirements within TAN 008-20.

### **8.3 Off-Spec Fuel**

Whilst there is no requirement for independent lab testing of delivered fuels, the Ship Registry is aware that this is a common practice. Where lab testing reveals that the sulphur content is above the limits, the Ship Registry's policy is stated within [TAN 006-22](#).

### **8.4 Sampling**

Designated MARPOL sampling points will be required for taking 'in use' fuel samples on ships over 400gt with an IAPP Certificate. New ships will require these from 1.4.22 whilst existing ships will require these from their first IAPP renewal survey after this date. Please refer to [TAN 005-21](#) for more information.

When testing an 'in use' sample, a Competent Authority shall assess this to a 95% confidence interval meaning that a samples with sulphur content of up to 0.53% m/m must be considered as compliant outside of a SECA and up to 0.11% m/m within a SECA.

## **9. Volatile Organic Compounds (VOCs)**

All tankers carrying crude oil shall have onboard and implement a VOC management plan which shall be approved by an RO – see section 4.4 of this notice.

A port located in a state that is party to MARPOL Annex VI may choose to apply controls on VOCs from tankers. A party which has applied such controls shall submit a notification to IMO which can be viewed via the GISIS database (MARPOL Annex VI module). Note that a Party may choose to apply such controls only to certain types/sizes of tankers or cargo types and this information shall be included within the notification.

Where VOC controls are mandated, a tanker may need to be provided with a vapour emission collection system (VECS) and shall use this system during the loading of relevant cargoes. A port may accept tankers that are not fitted with VECS for a period of three years after the date of their notification to IMO.

VECS shall be approved by an RO taking into account the standards in MSC/Circ.585.

## **10. Inadequate Port Reception Facilities**

The master of a ship which encounters difficulties in discharging waste to port reception facilities should report the matter in accordance with MEPC.1/Circ.834/Rev.1. This circular contains a sample format for reporting matters to the flag State and the port State.



## **11. Further Information**

### **Reference Material:**

- MARPOL Annex VI
- NOx Technical Code 2008
- Merchant Shipping (MARPOL Annex VI – Prevention of Air Pollution) Order 2014
- MSN 020 – Recognised Organisations
- IMO Resolution MEPC.320(74) – ‘2019 Guidelines for Consistent Implementation of the 0.50% Sulphur Limit Under MARPOL Annex VI’
- IMO Resolution MEPC.185(59) – ‘Guidelines for the Development of a VOC Management Plan’
- IMO Resolution MEPC.245(66) as amended by MEPC.281(70) – ‘Guidelines on the Method of Calculation of the Attained EEDI for New Ships’
- IMO Resolution MEPC.259(68) – 2015 Guidelines for Exhaust Gas Cleaning Systems
- IMO Resolution MEPC.340(77) – 2021 Guidelines for Exhaust Gas Cleaning Systems
- IMO Resolution MEPC.346(78) – 2022 Guidelines for the Development of a Ship Energy Efficiency Management Plan (SEEMP)
- MEPC.347(78) – Guidelines for the Verification and Company Audits by the Administration of Part III of the Ship Energy Efficiency Management Plan (SEEMP)
- IMO Resolution MEPC.348(78) – ‘2022 Guidelines for Administration Verification of Ship Fuel Oil Consumption Data’
- IMO Resolutions MEPC.352(78), MEPC.353(78), MEPC.354(78), MEPC.355(78), MEPC.338(76) – CII Rating Guidelines
- IMO Resolution MEPC.351(78) – 2022 Guidelines on Survey and Certification of the Attained EEXI
- IMO Circular MEPC.1/Circ.680 – ‘Technical Information on Systems and Operations to Assist Development of VOC Management Plans’
- IMO Circular MEPC.1/Circ.719 – ‘Technical Information on a Vapour Pressure Control System in Order to Facilitate the Development and the Update of VOC Management Plans’
- IMO Circular MEPC.1/Circ.834/Rev.1 – Consolidated Guidance for Port Reception Facility Providers and Users
- IMO Circular MEPC.1/Circ.864/Rev.1 – 2019 Guidelines for on Board Sampling for the Verification of the Sulphur Content of the Fuel Oil Used on Board Ships
- IMO Circular MEPC.1/Circ.876 – ‘Sample Format for the Confirmation of Compliance, Early Submission of the SEEMP Part II on the Ship Fuel Oil Consumption Data Collection Plan and its Timely Verification
- IMO Circular MSC/Circ.585 – Standards for Vapour Emission Control Systems

*Please note - The Isle of Man Ship Registry cannot give legal advice. Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from ship to ship. You should consider seeking independent legal advice if you are unsure of your own legal position.*

