

# Clause by Clause analysis of MARPOL Annex VI

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# **CLAUSE BY CLAUSE ANALYSIS OF MARPOL ANNEX VI**

## **Chapter 1 – General**

### **Regulation 1 – Application**

This regulation defines the scope of MARPOL Annex VI which generally extends to all ships except in special circumstances set out in several regulations of the Annex.

- This provision should be incorporated in national legislation.

### **Regulation 2 – Definitions**

The key definitions that are used throughout the Annex are set out in this regulation.

- This provision should be incorporated in national legislation.
- Where Annex VI is incorporated in legislation addressing air emissions in general, and not as an amendment to existing legislation incorporating the MARPOL Convention, it is important that the definitions in Article 2 of the Convention in so far as they apply to Annex VI also be incorporated.
- Resolution MEPC.278(70) adopted on 28 October 2016 amended regulation 2 by adding definitions related to the data collection system (regulation 22A). These new definitions should also be included in the national legislation.

### **Regulation 3 – Exceptions and Exemptions**

#### **Regulation 3.1**

The regulation sets out the scope of application of Annex VI and describes which emissions are not regulated by the Annex.

- This provision should be incorporated in national legislation.

#### **Regulation 3.2**

This regulation covers the granting of exemptions for ships participating in trials of emissions reduction and control technologies.

- This provision should be incorporated in national legislation, which should set out the conditions under which the exemptions will be granted. The legislation should explain how such exemptions are to be granted and the assessment of the conditions should be attached to those exemptions.
- Where, however, the State is not a flag State or involved in research and development related to ship emissions it may not be necessary to provide for this regulation in national legislation.
- Resolution MEPC.278(70) amended this regulation. These amendments should also be included in national legislation.

### **Regulation 3.3.1**

This regulation covers certain exemptions applicable to seabed mineral activities.

- This provision need not be incorporated in national legislation unless the Party has some interest in seabed mining.

### **Regulation 3.3.2**

This regulation addresses the use of hydrocarbons that are produced and used on site as fuel.

- This provision need not be incorporated in legislation implementing the MARPOL Convention, but could be incorporated in legislation addressing seabed mineral activities.

### **Regulation 4 – Equivalentents**

This regulation deals with the approval of alternative equipment, fuel oils or alternative means of compliance where they achieve emissions reductions which are at least as effective as that required under Annex VI.

- This provision should be incorporated in national legislation.

## **Chapter 2 – Survey, certification and means of control**

### **Regulation 5 – Surveys**

#### **Regulation 5.1**

Ships of 400 gross tonnage and above, and fixed and floating drilling rigs and other platforms are required to be surveyed and issued with certificates in accordance with the regulation.

- This provision should be incorporated in national legislation.

#### **Regulation 5.2**

Annex VI applies to all ships, but surveys and certificates are not required for ships below 400 gross tonnage. This regulation requires an Administration to establish appropriate measures for such ships.

- This provision should be incorporated in national legislation.

#### **Regulation 5.3**

Parties may delegate the conduct of surveys to which Annex VI applies to Recognised Organisations and should apply the IMO Guidelines for the authorisation of organisations acting on behalf of the Administration.

- This provision should be incorporated in national legislation.

#### **Regulation 5.4**

This regulation requires that ships to which Chapter 4 of Annex VI apply should comply with the surveys set out in this regulation.

- This provision should be incorporated in national legislation.
- The amendments to Annex VI adopted by Resolution MEPC.278(70) inserted additional provisions addressing surveys which implement the data collection system and these provisions should be included in national legislation.

#### **Regulation 6 – Issue or endorsement of Certificates and Statements of Compliance related to fuel oil consumption reporting**

This regulation provides the legal basis for the issuance of the International Air Pollution Prevention Certificate and the International Energy Efficiency Certificate. The certificates are issued after the surveys required under Regulation 5 have been successfully completed.

The amendments to Annex VI adopted by Resolution MEPC.278(70) inserted additional provisions which require the issuance of a Statement of Compliance related to fuel oil consumption to ships which are required to implement the data collection system.

- This provision should be incorporated in national legislation.

#### **Regulation 7 – Issue of a Certificate by another Party**

The regulation allows a Party to the Annex to survey and issue certificates to the ship of another Party provided the ship complies with the requirements of the Annex.

- This provision should be incorporated in national legislation.

#### **Regulation 8 – Form of Certificates and Statements of Compliance related to fuel oil consumption reporting**

- This provision should be incorporated in national legislation and could be included as a schedule to the legislation.

#### **Regulation 9 – Duration and validity of Certificates and Statements of Compliance related to fuel oil consumption reporting**

The regulation establishes the duration of the International Air Pollution Prevention Certificate which shall not exceed five (5) years and the International Energy Efficiency Certificate which shall be valid for the life of the ship, save where it ceases to be valid in accordance with the Annex.

The amendments to Annex VI adopted by Resolution MEPC.278(70) introduced the Statement of Compliance, which shall be valid for the calendar year in which it is issued and for the first five months of the following calendar year.

- This provision should be incorporated in national legislation.

## **Regulation 10 – Port State control on operational requirements**

This regulation allows a Party to inspect foreign ships which are in its ports or an offshore terminal under its jurisdiction to ensure compliance with the Annex.

The amendments to Annex VI adopted by Resolution MEPC.278(70) introduced the Statement of Compliance and requires that the Statement be subject to verification pursuant to a port State control inspection.

- This provision should be incorporated in national legislation.

## **Regulation 11 – Detection of violations and enforcement**

This regulation provides additional powers for the exercise of port State control over ships in the ports or offshore terminals of a Party and for cooperation between Parties in the detection, investigation and reporting of alleged contraventions of the provisions of the Annex.

- This provision should be incorporated in national legislation; however, the obligation to cooperate with other Parties need not be placed in legislation but implemented through memoranda of cooperation or similar instruments.

## **Chapter 3 – Requirements for control of emissions from ships**

### **Regulation 12 – Ozone-depleting substances**

This regulation prohibits the deliberate emissions of ozone-depleting substances as well as installations containing ozone-depleting substances on ships depending on the date of construction.

The regulation also requires ships with systems or equipment containing ozone-depleting substances and which are required to have an IAPP Certificate to carry and maintain an Ozone-depleting substances Record Book.

- This provision should be incorporated in national legislation. A Party may also decide to regulate emissions arising from leaks of an ozone-depleting substance as provided for in Regulation 12.2.

### **Regulation 13 – Nitrogen oxides (NO<sub>x</sub>)**

Control requirements in relation to NO<sub>x</sub> are contained in this regulation which apply to installed marine diesel engines. The regulation provides for three different levels of control, known as Tiers, which apply to a ship based on its construction date. The regulation also provides for Parties to introduce emission control areas for NO<sub>x</sub>.

- This provision should be incorporated in national legislation. These regulations also provide that, under certain circumstances, relaxation from the NO<sub>x</sub> certification requirements for certain specified domestic ships may be accepted. These instances should be addressed within the national legislation.
- Regulation 13.8 should be incorporated in national legislation to make mandatory the application of the NO<sub>x</sub> Technical Code 2008 to survey and certification of applicable marine diesel engines.

## **Regulation 14 – Sulphur oxides (SO<sub>x</sub>) and particulate matter**

Measures governing the control of sulphur oxides and particulate matter emissions are set out in this regulation and apply to all fuels used on board a ship. Parties may establish Emission Control Areas (ECA) which have stricter limits for SO<sub>x</sub> and particulate matter emissions than the general limits in the regulation, and the provisions should include requirements for ships to have written fuel oil changeover procedures and for changeovers to be recorded in a logbook.

- This provision should be incorporated in national legislation, except for regulations 14.2 and 14.8 to 14.10 which relate to functions to be undertaken by IMO and therefore not applicable as national regulations applying to ships.

## **Regulation 15 – Volatile organic compounds (VOCs)**

This regulation is primarily applicable to tankers (in limited cases, also to gas carriers) and sets out the requirements for the control of Volatile Organic Compounds (VOCs) on tankers when they are in certain ports and terminals. Tankers to which the regulation applies and which carry crude oil are required to have on board and implement a VOC management plan approved by the Administration.

A Party may choose to apply controls only to certain ports or terminals under its jurisdiction. Where a Party designates ports or terminals within its jurisdiction as ones where VOC emissions are to be regulated, it shall ensure that vapour emission control systems are provided at those ports and terminals and that the systems are approved by the Party, taking account the relevant standards developed by the IMO.

- This provision should be incorporated in national legislation, except for regulation 15.4 which relates to functions to be undertaken by IMO and therefore not applicable as national regulations applying to ships.
- In relation to the reporting obligations under to the IMO under regulation 15.2, a Party may decide not to place this obligation in legislation, but to have administrative procedures to ensure that this obligation is met.
- Of note, regulation 15.3 requires that the approved vapour emission control systems be operated in a manner so as to avoid undue delay to ships. The legislation should place an obligation on the operator of the port or terminal to comply with the regulations with appropriate penalties for non-compliance and the payment of compensation where undue delay is caused to a ship.

## **Regulation 16 – Shipboard incineration**

This regulation applies to shipboard incineration and sets out certain prohibitions in relation to the substances that can be incinerated and the circumstances where incineration should not be undertaken in ports, harbours and estuaries and should generally be incorporated in national legislation.

### **Regulation 16.5**

This regulation refers to other international instruments and to the development of alternative waste treatment process and hence is not therefore suitable as part of national regulations applying to ships.

## **Regulation 16.6.2**

This regulation provides that, under the circumstances given, exclusion from the requirements for incinerator certification may be allowed. This case should be addressed within the national legislation.

## **Regulation 17 – Reception facilities**

This regulation requires that the government of each Party undertakes to ensure the provision of reception facilities. This does not necessarily mean the government must provide the facility; a port authority or terminal operator could be required to provide the facilities. This regulation does not therefore necessarily need to be incorporated in national legislation incorporating MARPOL Annex VI.

The regulation is generally directed at ports and harbours, although there is scope to extend the requirements to include ship-recycling facilities.

## **Regulation 18 – Fuel oil availability and quality**

This regulation places an obligation to regulate fuel oil suppliers within the jurisdiction of the Party through the competent authorities of the State.

- This provision should be incorporated in national legislation. The Party is required to identify the agency that will regulate fuel oil suppliers. This agency need not be the maritime administration; it could be an entity within the ministry responsible for energy which has general responsibility for the regulation of fuel oil quality.
- Regulation 18.1 which addresses the promotion of compliant fuel oil need not be addressed in national legislation.

Parties are required to take “all reasonable steps” to promote the availability of compliant fuel oil.

Obligations are also placed on Parties to take action against ships which do not use compliant fuel oil, while fuel oil delivered to and used on board ships should meet the standards laid down in regulation 18.3. The obligation to report instances of non-compliant fuel to other Parties and to take action when reports are received is also set out in the regulation.

The regulations also include obligations on the part of fuel oil suppliers which are required to document the sulphur content of the fuel oil.

Ships subject to regulations 5 and 6 of MARPOL Annex VI are also required to record the details of the fuel oil delivered to and used on board in a Bunker Delivery Note (BDN). The BDN is to be provided to the ship by the local fuel oil supplier and that the BDN contains at least the information specified in Appendix V of MARPOL Annex VI, as amended by Resolution MEPC.286(71).

Regulation 18.9 also requires the Party to ensure that it designates an appropriate authority or agency to carry out the registration and control of fuel oil suppliers.

- This provision should be incorporated in national legislation, except for regulation 18.1 which deals with the promotion of the availability of fuel.
- The provisions of Appendix V to MARPOL Annex VI are applicable when developing legislation as it sets out the information to be included in the Bunker Delivery Note.

- In relation to the implementation of regulation 18.9, a Party may decide that is not necessary to incorporate the obligation in merchant shipping legislation, but rather through legislation addressing fuel oil quality control or through administrative procedures. The provisions should require the fuel oil supplier to provide a BDN to a ship being supplied with fuel oil.

## **Chapter 4 – Regulations on energy efficiency for ships**

### **Regulation 19 – Application**

The energy efficiency regulations apply to all ships of 400 gross tonnage and above. The requirements do not apply to ships solely engaged in voyages in national waters or ships not propelled by mechanical means, platforms and drilling rigs. Ships which have diesel-electric propulsion, turbine propulsion or hybrid propulsion systems are excluded from the requirements of regulations 20 and 21. There are also limited exceptions in the initial years of implementation for ships for which the Administration may waive the requirement to comply with the Attained and Required Energy Efficiency Design Index (regulations 20 and 21). This is not applicable if the ship's building contract is placed or the keel is laid (or similar stage of construction) on or after 1 July 2017 or if the delivery is on or after 1 July 2019. Major conversion of a new or existing ship is treated in a similar manner. Details of any waivers are required to be communicated by the flag State administration to IMO for circulation to the Parties to the Protocol.

- This provision should be incorporated in national legislation.

### **Regulation 20 – Attained Energy Efficiency Design Index (EEDI)**

The attained EEDI is to be calculated for new ships and new or existing ships (as defined in regulation 2) which have undergone a major conversion and is to be calculated taking into account the relevant guidelines developed by the IMO.

- This provision should be incorporated in national legislation.

### **Regulation 21 – Required EEDI**

The regulation applies to new ships and new or existing ships (as defined in regulation 2) which have undergone a major conversion and establishes the method of determining the required EEDI.

- This provision should be incorporated in national legislation, except for regulation 21.6 which places an obligation on the IMO.

### **Regulation 22 – Ship Energy Efficiency Management Plan (SEEMP)**

Both new and existing ships are required to keep on board a ship-specific Ship Energy Efficiency Management Plan (SEEMP). The SEEMP establishes a mechanism to improve energy efficiency using operational measures.

The SEEMP for ships of 5,000 gross tonnage and above shall include a description of the methodology that will be used to collect the data required by regulation 22A.1 and the processes that will be used to report the data. This requirement is to be implemented on or before 31 December 2018.

- This provision should be incorporated in national legislation.



## **Regulation 22A – Collection and reporting of ship fuel oil consumption data**

This regulation applies to every ship of 5,000 gross tonnage and above and places an obligation on the operator of the ship to collect data related to fuel oil consumption as specified in Appendix IX to Annex VI, for the calendar year 2019 and each subsequent calendar year or portion thereof, as appropriate, according to the methodology included in the SEEMP.

This data is required to be sent by the ship to the flag State Administration, which upon verification, will issue to the ship a Statement of Compliance related to fuel oil consumption reporting. The Party is obligated to transmit to the IMO Ship Fuel Oil Consumption Database the reported data on fuel oil consumption supplied to it by its registered ships within a month of the issuance to the Statement of Compliance.

- This provision should be incorporated in national legislation, except for regulations 22A.10, 22A.11 and 22A.12 which place obligations on the IMO.

## **Regulation 23 – Promotion of technical cooperation and transfer of technology relating to the improvement of energy efficiency of ships**

- This provision need not be incorporated in national legislation.

## **Chapter 5 - Verification of compliance with the provisions of this Annex**

- These provisions need not be incorporated in national legislation.

## **Appendices**

### **Appendix I – Form of International Air Pollution Prevention (IAPP) Certificate (regulation 8):**

This provision should be incorporated in national legislation.

### **Appendix II – Test cycles and weighting factors (regulation 13):**

This provision need not be incorporated in national legislation.

### **Appendix III – Criteria and procedures for the designation of emission control areas (regulations 13.6 and 14.3):**

This provision need not be incorporated in national legislation.

### **Appendix IV – Type approval and operating limits for shipboard incinerators (regulation 16):**

This provision need not be incorporated in national legislation.

### **Appendix V – Information to be included in the bunker delivery note (regulation 18.5):**

This provision should be incorporated in national legislation.

**Appendix VI – Fuel verification procedure for MARPOL Annex VI fuel oil samples (regulation 18.8.2):**

This provision should not be incorporated in national legislation.

**Appendix VII – Emission control areas (regulations 13.6 and 14.3):**

This provision should be incorporated in national legislation.

**Appendix VIII – Form of International Energy Efficiency (IEE) Certificate:**

This provision should be incorporated in national legislation.

**Appendix IX – Information to be submitted to the IMO Ship Fuel Oil Consumption Database:**

This provision should be incorporated in national legislation.

**Appendix X – Form of Statement of Compliance – Fuel Oil Consumption Reporting:**

This provision should be incorporated in national legislation.