Koningskade 4
P.O. Box 16191
2500 BD The Hague
The Netherlands

Paris MoU on Port State Control

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Telephone: +31 70 456 1508
Telefax: +31 70 456 1599
E-mail: secretariat@parismou.org
Internet : www.parismou.org

PORT STATE CONTROL COMMITTEE INSTRUCTION 49/2016/10

Guidelines for Port State Control Officers Checking Compliance with MARPOL Annex VI

1. INTRODUCTION

1.1. General

Annex VI of MARPOL entered into force on 19 May 2005. The Annex was revised in 2008 and became effective on 1 July 2010.

1.2. Goals and purpose

This document is intended to provide basic guidance for a harmonised approach of port State control inspections in compliance with Annex VI of MARPOL (hereinafter referred to as the Annex) and the recognition of deficiencies and application of control procedures.

1.3. Application

The provisions of the Annex apply to all ships, except where expressly provided otherwise.

An IAPP Certificate is required for all ships of 400 GT or above, and platforms and drilling rigs, engaged in international voyages. Flag States may establish alternative measures to demonstrate compliance of ships of less than 400 GT engaged in international voyages.

Installations which contain ozone depleting substances, other than hydro-chlorofluorocarbons, are prohibited on ships constructed after 19 May 2005 or in the case of ships constructed before this date when the equipment has a contract delivery date, or is delivered, on or after 19 May 2005.

Each ship required to have an IAPP certificate which has rechargeable systems that contain ozone depleting substances shall maintain an Ozone Depleting Substances Record Book.

NOx regulations:

- Tier I emission limits apply to all marine diesel engines with a power output of more than 130 kW installed on ships constructed on or after 1 January 2000 and prior to 1 January 2011.
- Emission limits equivalent to Tier I may apply to marine diesel engines with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 liters installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 according to regulation VI/13.7.
- Tier II emission limits apply to all marine diesel engines with a power output of more than 130kW installed on ships constructed on or after 1 January 2011.
- Tier III emission limits apply to all marine diesel engines with a power output of more than 130 kW installed on ships, operating in a NOx emission control area, constructed on or after the date of adoption of the NECA (or a later date as may be specified in the amendment to the Convention designating the NECA, whichever is later).

Major Conversion
For the purpose of Annex VI/Reg.13 Major Conversions means:

- Replacement of an engine;
- Substantial modification (as defined in the NOx Technical Code);

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If an engine is replaced with a non-identical marine diesel engine, the replacement engine shall comply with the standards set forth at the time of replacement.

If the engine is substantially modified the following applies:

- Ships constructed prior to 1 January 2000, Tier I standards shall apply
- Ships constructed on or after 1 January 2000, the standards in force at the time the ship was constructed shall apply

SOx and particulate matter regulations:

The sulphur content of any fuel oil used on board ships is required not to exceed the following limits:

3.50% m/m on and after 1 January 2012; and

0.50% m/m on and after 1 January 2020.

However, for ships operating within an Emission Control Area the sulphur content of fuel oil used on board ships shall not exceed 0.10% m/m; or,

compliance with SOx emission control requirements shall be achieved by an equivalent method as approved.

Incinerators installed on or after 1 January 2000 are required to comply with requirements contained in Appendix IV to the Annex, however, the list of prohibited substances/materials applies to all incinerators.

A tanker carrying crude oil is required to have on board and implement a VOC management plan approved by the flag State. Tanker vapour emission control systems are only required where their fitting is specified by the relevant authority. The relevant authorities may vary in each port State (e.g. the environmental agency, the port authorities or the PSC authorities of the port State).

1.3.1. Inspections of ships not required to carry the IAPP certificate

On ships not required to be provided with an IAPP Certificate, the PSCO should judge whether the condition of the ship and its equipment satisfies the requirements set out in the Annex.

The PSCO should be guided by the procedures for ships referred to in section 2 and be satisfied that the ship and crew do not present a danger to those on board or pose an unreasonable threat of harm to the marine environment.

If the ship has a form of certification other than the IAPP Certificate, the PSCO may take such documentation into account in the evaluation of the ship.

1.4. Relevant documentation

For the relevant documentation please see paragraph 2.2.1 “Certificates and Documents”.

1.5. Definitions and abbreviations

The PSCCInstruction containing “Definitions and Abbreviations” serves as general document and is to be used in conjunction with this Paris MoU document.

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2. INSPECTION OF SHIP

2.1. Pre-boarding preparation

The PSCO should be familiar with the requirements of MARPOL Annex VI and any related previously recorded PSC deficiency. It is a good practice to collect information from IMO GISIS website[1] and verify compliance of the ship by the status of the recognized organization file.

2.2. Initial Inspection

The PSCO should ascertain the date of construction of the ship and installation of equipment on board which is subject to the provisions of the Annex, in order to confirm which regulations are applicable.

2.2.1. *Certificates and documents*

The PSCO should examine the following documents where applicable:

1. the International Air Pollution Prevention Certificate (IAPP Certificate, regulation VI/6), including its Supplement

   The IAPP Certificate's validity should be confirmed by verifying that the Certificate is properly completed and signed and that required surveys have been performed;

2. the Engine International Air Pollution Prevention Certificate (EIAPP Certificate, paragraph 2.2 of the NOx Technical Code) including its supplement, for all diesel engines, with the exception of emergency diesel engines, engines installed in lifeboats and any device or equipment intended to be used solely in case of emergency.

   The Supplement to the IAPP Certificate should be used to establish how the ship is equipped for the prevention of air pollution;

3. the International Energy Efficiency Certificate (IEEC, regulation VI/6) including its supplement.

   The IEEC shall be valid throughout the life of the ship unless the ship is withdrawn from service, a new certificate is issued following a major conversion or upon transfer of the ship to another flag State;

4. the Technical File (paragraph 2.3.4 of the NOx Technical Code) for each applicable diesel engine;

5. depending on the method used for demonstrating NOx compliance each applicable diesel engine:

   a. the Record Book of Engine Parameters for each marine diesel engine (paragraph 6.2.2.7 of the NOx Technical Code) demonstrating compliance with regulation VI/13 by means of the diesel engine parameter check method; or
   b. documentation relating to the simplified measurement method; or
   c. documentation related to the direct measurement and monitoring method;

6. the Approved Method File (regulation VI/13.7);

7. written procedures covering fuel oil change over operations (which is not required to be in English) where separate fuel oils are used in order to achieve compliance (regulation VI/14.6);

[1] https://gisis.imo.org/Public/MARPOL6/Default.aspx

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8. approved documentation relating to any installed exhaust gas cleaning systems, or equivalent means, to reduce SOx emissions (regulation VI/4);

9. the Energy Efficiency Design Index technical file (regulation VI/20)

10. the Ship Energy Efficiency Management Plan (SEEMP, regulation VI/22)

11. the bunker delivery notes and associated samples or records thereof (regulation VI/18).

    In the case where the bunker delivery note or the representative sample as required by regulation VI/18 presented to the ship are not in compliance with the relevant requirements, the master or officer in charge of the bunker operation should have documented that through a Notification to the ship's flag Administration with copies to the port Authority under whose jurisdiction the ship did not receive the required documentation pursuant to the bunkering operation and to the bunker deliverer. A copy should be retained on board the ship, together with any available commercial documentation, for the subsequent scrutiny of port State control;

12. the copy of the type approval certificate of any shipboard incinerator installed on or after 1 January 2000 (for the incinerators with capacities up to 4,000 kW) (IMO Resolution MEPC.244(66));

13. the Ozone Depleting Substances Record Book (regulation VI/12.6);

14. the VOC Management Plan (regulation VI/15.6); and

15. any notification to the ship's flag Administration issued by the master or officer in charge of the bunker operation together with any available commercial documentation relevant to non-compliant bunker delivery.

2.2.2 *Initial inspection within an ECA or first port after transiting an ECA*

When a vessel is inspected in a port in the ECA, or when the port is first port of call after transiting the ECA the PSCO will look at:

1. Bunker delivery showing a sulphur content of not more than 0.10% m/m for fuel oil delivered to and used on board (regulation VI/18.5 and VI/14.4)

2. Evidence of a written procedure (which is not required to be in English) and record of changeover to fuel oil with a sulphur content of not more than 0.10% m/m before entering the ECA such that compliant fuel is being used when entering the ECA.

   The volume of low sulphur fuel oils in each tank, as well as the date, time and position of the ship shall be recorded in a logbook (as prescribed by the Administration) at the time that the fuel-change-over operation has been completed prior to entering the ECA or is commenced after exit from such an area.

For vessels operating in, or expecting to operate in, low temperature air and/or water conditions the PSCO may pay special attention to:

1. Existing pipelines for delivery of compliant fuel oil, with a sulphur content of not more than 0.10% m/m, to machinery spaces are located, or equipped with appropriate heating facilities, to provide functionality of the pipelines in low temperature air and/or water conditions;

2. Written fuel change over procedures should include required actions providing fuel delivery to machinery spaces in low temperature water and/or air conditions. The possibility of unavailability of compliant fuel in these conditions should be excluded.

2.2.3. *Overall condition of the ship*

If the certificates and documents are valid and appropriate and, after a tour around the vessel to check that the overall condition of the vessel meets generally accepted international rules and standards, the PSCO's general impressions and observations on board confirm a good standard of maintenance, the inspection should be considered satisfactorily concluded.

If the PSCO's general impressions or observations on board give clear grounds (see paragraph 2.3) for believing that the condition of the ship or its equipment do not correspond substantially with the particulars of the certificates or the documents, the PSCO should proceed to a more detailed inspection.

2.3. Clear grounds

Clear grounds to conduct a more detailed inspection include (but are not limited to):

1. Evidence that a certificate or certificates are missing or clearly invalid;
2. Evidence that mandatory supporting documents are missing or clearly invalid;
3. The absence or malfunctioning of equipment or arrangements specified in the certificates or documents;
4. The presence of equipment or arrangements not specified in the certificates or documents;
5. Information or evidence that the master or crew are not familiar with related shipboard operations, or that such operations have not been carried out;
6. Evidence that the fuel oil, delivered to and/or used on board the ship does not comply with the requirements.

2.4. More Detailed Inspection

2.4.1. The PSCO should verify that:

1. there are effectively implemented maintenance procedures for the equipment containing ozone-depleting substances; and
2. there are no deliberate emissions of ozone-depleting substances.

2.4.2. The PSCO should obtain confirmation of type approval and maintenance of diesel engines, where applicable, through:

1. examination of the EIAPP Certificate and Supplement, Technical File and, if applicable, Record Book of Engine Parameters or Onboard Monitoring Manual and related data;
2. examination of the Technical File to confirm that no unapproved modifications, which may affect on NOx emission, have been made to the diesel engines;
3. examination if diesel engines, with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres are installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 and are certified, if so required, in accordance with regulation VI/13.7;

4. verification that any diesel engine subjected to a major conversion as defined in regulation VI/13, for ships constructed before 1 January 2000, has been approved by the Administration; and

5. verification that emergency diesel engines, intended to be used solely in case of emergency, are still in use for this purpose.

2.4.3. The PSCO should check:

1. whether the quality of fuel oil used on board the ship complies with the provisions of regulation VI/14 and VI/18, taking into account Appendix VI to the Annex.

   Shortage or unavailability on board of the ship of fuel oil with a sulphur content of not more than 0.10% m/m due to possible considerable changing of weather conditions during the time the ship operates in the ECA should not be accepted;

2. the record required by regulation VI/14.6, in order to identify the sulphur content of fuel oil used while the ship is within SOx emission control areas, or that other equivalent approved means have been applied as required.

2.4.4. If the ship is a tanker, as defined in regulation VI/2.21, the PSCO should confirm that the vapour collection system approved by the Administration is installed, if required under regulation VI/15.

2.4.5. If the ship is a tanker carrying crude oil, the PSCO should verify that there is on board an approved VOC Management Plan.

2.4.6. The PSCO should verify that the shipboard incineration of sewage sludge or sludge oil in boilers or marine power plants is not undertaken while the ship is inside ports, harbours or estuaries (regulation VI 16.4)

2.4.7. The PSCO should verify that the shipboard incinerator, if required by regulation VI/16.6.1, is approved by the Administration and properly maintained, and that no prohibited substances are incinerated. Therefore, the PSCO should examine whether:

1. the shipboard incinerator is consistent with the the type approval certificate specifications;

2. the operational manual, in order to operate the shipboard incinerator within the limits provided in appendix IV to the Annex, is provided;

3. the combustion chamber flue gas outlet temperature is monitored as required (regulation VI/16.9); and

4. none of the following substances are incinerated:

   a. Annex I, II and III cargo residues or related contaminated packing materials;

   b. polychlorinated biphenyls (PCBs);

   c. garbage, as defined in Annex V of the present Convention, containing more than traces of heavy metals;

   d. refined petroleum products containing halogen compounds;

   e. sewage sludge and sludge oil either of which are not generated on board the ship; and

   f. exhaust gas cleaning system residues.

2.4.8. The PSCO may examine the operational procedures by confirming that:

1. the master or crew are familiar with the procedures to prevent emissions of ozone-depleting substances;

2. the master or crew are familiar with the proper operation and maintenance of the diesel engines, in accordance with their Technical Files or Approved Method file, as applicable, and with due regard for Emission Control Areas for NOx control;

3. the master or crew have under taken the necessary fuel changeover procedures or equivalent, associated with demonstrating compliance within a SOx emission control area;

4. the master or crew are familiar with the garbage screening procedure to ensure that prohibited garbage is not incinerated;

5. the master or crew are familiar with the operation of the shipboard incinerator, as required by regulation VI/16.6, within the limit provided in appendix IV to the Annex, in accordance with the operational manual;

6. the master or crew are familiar with the regulation of emissions of volatile organic compounds (VOC), when the ship is in ports or terminals under the jurisdiction of a Party to the 1997 Protocol to MARPOL in which VOC emissions are to be regulated, and is familiar with the proper operation of a vapour collection system approved by the Administration (in case the ship is a tanker as in regulation VI/2.21);

7. the master or crew are familiar with the application of the VOC Management Plan, if applicable; and

8. the master or crew are familiar with bunker delivery procedures in respect of bunker delivery notes and retained samples as required by regulation VI/18.

2.5. Expanded Inspection

There are no special requirements, related to the Annex, for the PSCO to follow during an expanded inspection.

3. FOLLOW-UP ACTION

3.1. Deficiencies warranting detention

3.1.1. The PSCO should use professional judgment to determine whether to detain the ship or to allow it to sail with deficiencies, which do not pose an unreasonable threat of harm to the marine environment. The PSCO should be guided by the principle that the requirements contained in the Annex, with respect to the construction, equipment and operation of the ship, are essential for the protection of the marine environment and that departure from these requirements could constitute an unreasonable threat of harm to the marine environment.

3.1.2. In order to assist the PSCO in the decision whether to detain the ship or not, the following deficiencies are considered to be of such a serious nature that they may warrant the detention of the ship involved:

1. absence of valid IAPP Certificate, EIAPP Certificates, IEE Certificate or Technical Files;
2. a diesel engine, with a power output of more than 130 kW, installed on board a ship constructed on or after 1 January 2000, or a diesel engine having undergone a major conversion on or after January 2000 and does not comply with the NOx Technical Code or the relevant NOx emission limit;

Koningskade 4
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3. a diesel engine, with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres, which is installed on board a ship constructed on or after 1 January 1990 but prior to 1 January 2000, and an Approved Method for that engine has been certified by an Administration and was commercially available, for which an Approved Method is not installed after the first renewal survey specified in regulation VI/13.7.2;
4. depending on the method used for demonstrating SOx compliance, the sulphur content of any fuel oil being used on board exceeds 3.50% m/m on and after 1 January 2012 and 0.50% m/m on and after 1 January 2020[2], taking into account the provisions of regulation VI/18.2;
5. non-compliance with the relevant requirements while operating within an Emission Control Area for SOx;
6. an incinerator installed on board the ship on or after 1 January 2000 does not comply with requirements contained in appendix IV to the Annex, or the standard specifications for shipboard incinerators developed by the Organization (IMO Resolution MEPC.76(40) and MEPC.93(45));
7. the master or crew are not familiar with essential procedures regarding the operation of air pollution prevention equipment as defined in paragraph 2.4.8 above and
8. burning of non-compliant fuel in an ECA since it constitutes an unreasonable threat of harm to the environment. If the master claims that is was not possible to bunker compliant fuel prior to entering the ECA the PSCO should use the assessment scheme in appendix 1 of this instruction.

3.2. Actions to be considered

Deficiencies that may warrant a detention of the ship can be found in section 3.1.2. The PSCO should use professional judgement to decide whether the deficiencies reported are detainable or not and whether an ISM related deficiency should also be reported.

4. REPORTING

4.1. Reports

Any deficiency found should be recorded as an individual deficiency.

If an inspection indicates that a ship has emitted any of the substances covered by the Annex, in violation of the provision of the Annex, a report shall be forwarded to the Administration for any appropriate action, taking into account the requirements of regulation VI/11.

[2] Or 2025, depending on the results of the review of regulation VI/14.1.3, as described in regulation VI/14.8

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Appendix 1

Non-availability of compliant fuel oil claimed

In case non-availability of ECA compliant fuel is claimed while a vessel is in an ECA the master/owner must present a record of actions taken to attempt to bunker compliant fuel *and* provide evidence

- of an attempt to purchase compliant fuel in accordance with its voyage plan *and*
- if it was not made available where planned that attempts were made to locate alternative sources for such oil *and*
- that despite best efforts to obtain compliant fuel no such fuel was made available for purchase.

Best efforts to procure compliant fuel include, but are not limited to, investigating alternate sources of fuel oil prior to commencing the voyage or en-route prior to entering the ECA.

The ship should not be required to deviate from its intended voyage or to unduly delay the voyage in order to achieve compliance.

If the ship provides the information as above the Port State should take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

The master/owner may provide evidence as below to support their claim (not exhaustive):

- A copy (or description) of the ship's voyage plan in place at the intended time of entry into the ECA, including the vessel's port of origin and port of destination.
- The time the vessel first received notice it would be conducting a voyage involving transit/arrival in the ECA, and the vessel's location when it first received such notice.
- The date and time the ship expects to enter and exit the ECA.
- A description of the actions taken to attempt to achieve compliance prior to entering the ECA, including a description of all attempts that were made to locate alternative sources of compliant fuel, and a description of the reason why compliant fuel was not available (e.g. compliant fuel was not available at ports on the "intended voyage", fuel oil supply disruptions at port, etc.).
- Cost of compliant fuel is not considered to be a valid basis for claiming non-availability of fuel.
- Include names and addresses of the fuel oil suppliers contacted and the dates on which contact was made.
- In cases of fuel oil supply disruption, the name of the port at which the vessel was scheduled to receive compliant fuel and the name of the fuel supplier that is reporting the non-availability of compliant fuel.
- The availability of compliant fuel at the first port-of-call in the ECA and plans to obtain that fuel.
- If the vessel has operated in the ECA in the previous 12 months, provide names of all ports visited, the dates of the port calls and whether the vessel used compliant fuel
- If applicable, identify and describe any operational constraints that prevented use of compliant fuel, e.g. with respect to viscosity or other fuel oil parameters.

If, despite best efforts, it was not possible to procure compliant fuel prior to entering the ECA the master/owner must notify the Port State Control authorities in the port of arrival in the ECA *and* the flag Administration (VI/18.2.4).

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