

Port State Control for MARPOL Annex VI Assembly Resolution A.1119(30) and MEPC.321(74)



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MARPOL Annex VI for Algeria
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Dr Zabi Bazari
REMPEC Consultant

What is Port State Control (PSC)?

- It is an inspection of **foreign ships** in **national ports** by an **authorized inspector** of the Maritime Administration for verifying that:
 - The ship is in **compliance** with International Conventions (e.g. SOLAS, LL (Load Lines), MARPOL, STCW (Standards of Training, Certification and Watchkeeping).).
 - The ship is **manned and operated** in compliance with applicable international laws.
- **Objective:**
 - **Enforcement** of the shipping regulations.

PSC legal basis and underlying authority

- Authority for carrying out PSC comes from:
 - **International** treaties and Conventions
 - **Bilateral / multilateral** agreements
 - **National** Laws
- In exercising port State control, Parties should **only apply** those provisions of the **conventions** which are **in force** and which **they have accepted**.



Can a PSC authority do anything they want to a foreign ship?

Legal basis: UNCLOS on flag and port States enforcement

Article 217 - Enforcement by flag States

States shall ensure that vessels flying their flag or of their registry **carry on board certificates** required, and do **periodically inspection**.

Article 218 - Enforcement by port State

When a vessel is voluntarily within a port or at an off-shore terminal of a State, **that State may undertake investigations** and, where the evidence so warrants, **institute proceedings** against that vessel.

Legal basis: Provisions within international conventions

- Many IMO conventions include provisions that give rights to undertake PSC including:
 - **MARPOL Convention:**
 - **Article 5** on Certificates and special rules on inspection of ships
 - **Articles 6** on Detection of violations and enforcement of the Convention
 - **MARPOL Annex VI regulations 10 and 11**
 - **SOLAS** (The International Convention for the Safety of Life at Sea)
 - **Etc.**

PSC Requirements and Procedures

PSC Inspections

- Initial Inspection
- Clear grounds
 - Evidence that the **ship, its equipment, or its crew** does not correspond substantially with the **requirements of the relevant conventions**;
 - or that the **master/crew members** are not familiar with essential shipboard procedures on ... the prevention of pollution
- Detailed inspection

Planning and **reporting** of the outcome are important elements of PSC

Procedures - Port State Control

- IMO recognizes effectiveness of PSC.
- IMO recognizes the importance of harmonized implementation of regulations.
- Adopted in 2017, Resolution A.1119(30)
- Invites governments to implement procedures for PSC.

CHAPTER 1 – GENERAL

- 1.1 Purpose
- 1.2 Application
- 1.3 Introduction
- 1.4 Provision for port State control
- 1.5 Ships of non-Parties
- 1.6 Ships below convention size
- 1.7 Definitions
- 1.8 Professional profile of PSCOs
- 1.9 Qualification and training requirements of PSCOs

Procedures for PSC

CHAPTER 2 – PORT STATE INSPECTIONS

- 2.1 General
- 2.2 Initial inspections
- 2.3 General procedural guidelines for PSCOs
- 2.4 Clear grounds
- 2.5 More detailed inspections

CHAPTER 3 – CONTRAVENTION AND DETENTION

- 3.1 Identification of a substandard ship
- 3.2 Submission of information concerning deficiencies
- 3.3 Port State action in response to alleged substandard ships
- 3.4 Responsibilities of port State to take remedial action
- 3.5 Guidance for the detention of ships
- 3.6 Suspension of inspection
- 3.7 Procedures for rectification of deficiencies and release

CHAPTER 4 – REPORTING REQUIREMENTS

- 4.1 Port State reporting
- 4.2 Flag State reporting
- 4.3 Reporting of allegations under MARPOL

CHAPTER 5 – REVIEW PROCEDURES

- 5.1 Report of comments

Appendices to the PSC Guidelines

- A large number of appendices
- Appendices are 100 pages of total 116 pages.

Appendices

Appendix 1	Code of Good Practice for port State control officers conducting inspections within the framework of the regional Memoranda of Understanding and Agreement on Port State Control
Appendix 2	Guidelines for the detention of ships
Appendix 3	Guidelines for investigations and inspections carried out under Annex I of MARPOL
Appendix 4	Guidelines for investigations and inspections carried out under Annex II of MARPOL
Appendix 5	Guidelines for discharge requirements under Annexes I and II of MARPOL
Appendix 6	Guidelines for more detailed inspections of ship structural and equipment requirements
Appendix 7	Guidelines for control of operational requirements
Appendix 8	Guidelines for port State control officers on the ISM Code
Appendix 9	Guidelines for port State control related to LRIT
Appendix 10	Guidelines for port State control under the 1969 Tonnage Convention
Appendix 11	Guidelines for port State control officers on certification of seafarers, manning and hours of rest
Appendix 12	List of certificates and documents
Appendix 13	Report of inspection in accordance with IMO port State control procedures
Appendix 14	Report of deficiencies not fully rectified or only provisionally rectified
Appendix 15	Report of action taken to the notifying authority
Appendix 16	Format for the Report of contravention of MARPOL (article 6)
Appendix 17	Comments by flag State on detention report
Appendix 18	List of instruments relevant to port State control procedures

Inspection of ships of non-Parties

- Ships of non-Parties or below convention size should be given **no more favourable treatment**.

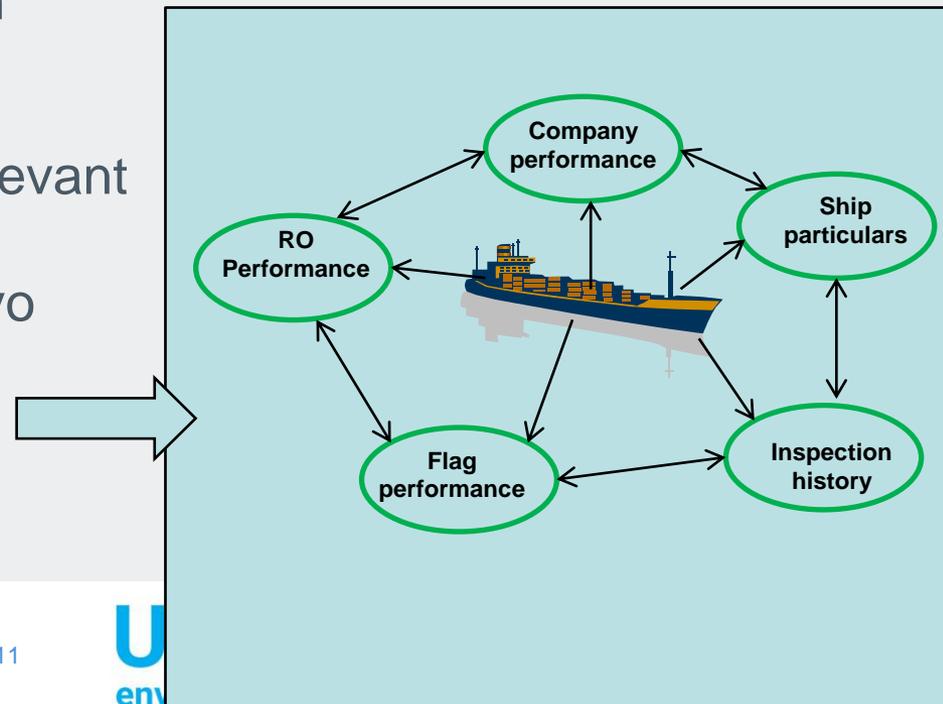


What does “**no more favourable treatment**” means?

Port State Inspections

PSC may be undertaken on the basis of:

1. the initiative of the Party;
2. the request of, another Party;
3. information provided by a member of the crew, a professional body, an association, etc.
4. Based on system used by the relevant MOU: For example a **risk-based system of inspection** (e.g. Tokyo MOU):



PSC Inspection: Pre-boarding preparation

- PSCO should be familiar with MARPOL Annex VI requirements and any related previously recorded PSC deficiencies.
- It is a good practice to collect information from IMO **GISIS website** and other sources available (MOU, Port State itself, HIS Fairplay, ...).

The screenshot shows the IMO Global Integrated Shipping Information System (GISIS) Secretariat Area homepage. The page features a blue header with the IMO logo and the text 'Global Integrated Shipping Information System'. Below the header, there is a search bar with the placeholder text 'Find module by keyword' and a 'Search' button. The main content area is titled 'Welcome to the Secretariat Area' and displays a grid of modules. The 'Port State Control' module is highlighted with a red oval. Other modules include 'Reporting Requirements Dashboard', 'Marine Casualties and Incidents', 'Ship and Company Particulars', 'Status of Treaties', 'Simulators', 'Risk Management', 'Organizational Planning', and 'Country Maritime Profile'. The bottom of the page features the REMPEC logo and the IMO logo.

IMO INTERNATIONAL MARITIME ORGANIZATION
Global Integrated Shipping Information System

Secretariat Area

Welcome to the Secretariat Area

Find module by keyword

Reporting Requirements Dashboard
Status and completeness of information in GISIS received from IMO members.

Marine Casualties and Incidents
Data on marine casualties and incidents, as defined by circulars MSC-MEPC.3/Circ.3

Port State Control
Information communicated under the provisions of SOLAS regulation I/19, article 11 of MARPOL, article 21 of Load Lines, article X(3) of STCW and the Procedures for port State control.

Organizational Planning
Information on the status of planned and new outputs related to the High-level Action Plan.

Country Maritime Profile
Information from Member States to enable targeted technical co-operation and resources.

Ship and Company Particulars
Search the world fleet of ships by IMO Number and look up company particulars by IMO Company Number.

Status of Treaties
Status of ratification of IMO conventions, including global tonnage figures.

Simulators
Information on simulators available for use in maritime training.

Risk Management
Information on the status of risk events related to the Secretariat's business plan.

Development of Amendments
Development of amendments to the 1974 SOLAS Convention and related mandatory instruments.

REMPEC

INTERNATIONAL MARITIME ORGANIZATION

Initial inspections

- **General impression** (will depend on scope of inspection).
- Examine relevant **certificates and documents** and check their validity
- Assess the overall condition of the ship / equipment
- Communicate with and assess the crew.
- If PSCO observes **clear grounds** for believing that the ship, its equipment or its crew **do not substantially** meet the requirements, the PSCO should proceed to a more **detailed inspections**.

Clear grounds (section 2.4.2)

2.4.2 "Clear grounds" to conduct a more detailed inspection include but are not limited to:



.1 the absence of principal equipment or arrangements required by the relevant conventions;



.2 evidence from a review of the ship's certificates that a certificate or certificates are clearly invalid;



.3 evidence that documentation required by the relevant conventions and listed in appendix 12 is not on board, is incomplete, is not maintained or is falsely maintained;

.4 evidence from the PSCO's general impressions and observations that serious hull or structural deterioration or deficiencies exist that may place at risk the structural, watertight or weathertight integrity of the ship;

.5 evidence from the PSCO's general impressions or observations that serious deficiencies exist in the safety, pollution prevention or navigational equipment;



.6 information or evidence that the master or crew is not familiar with essential shipboard operations relating to the safety of ships or the prevention of pollution, or that such operations have not been carried out;

.7 indications that key crew members may not be able to communicate with each other or with other persons on board;

.8 the emission of false distress alerts not followed by proper cancellation procedures; and

.9 receipt of a report or complaint containing information that a ship appears to be substandard.

Procedures for rectification of deficiencies and release

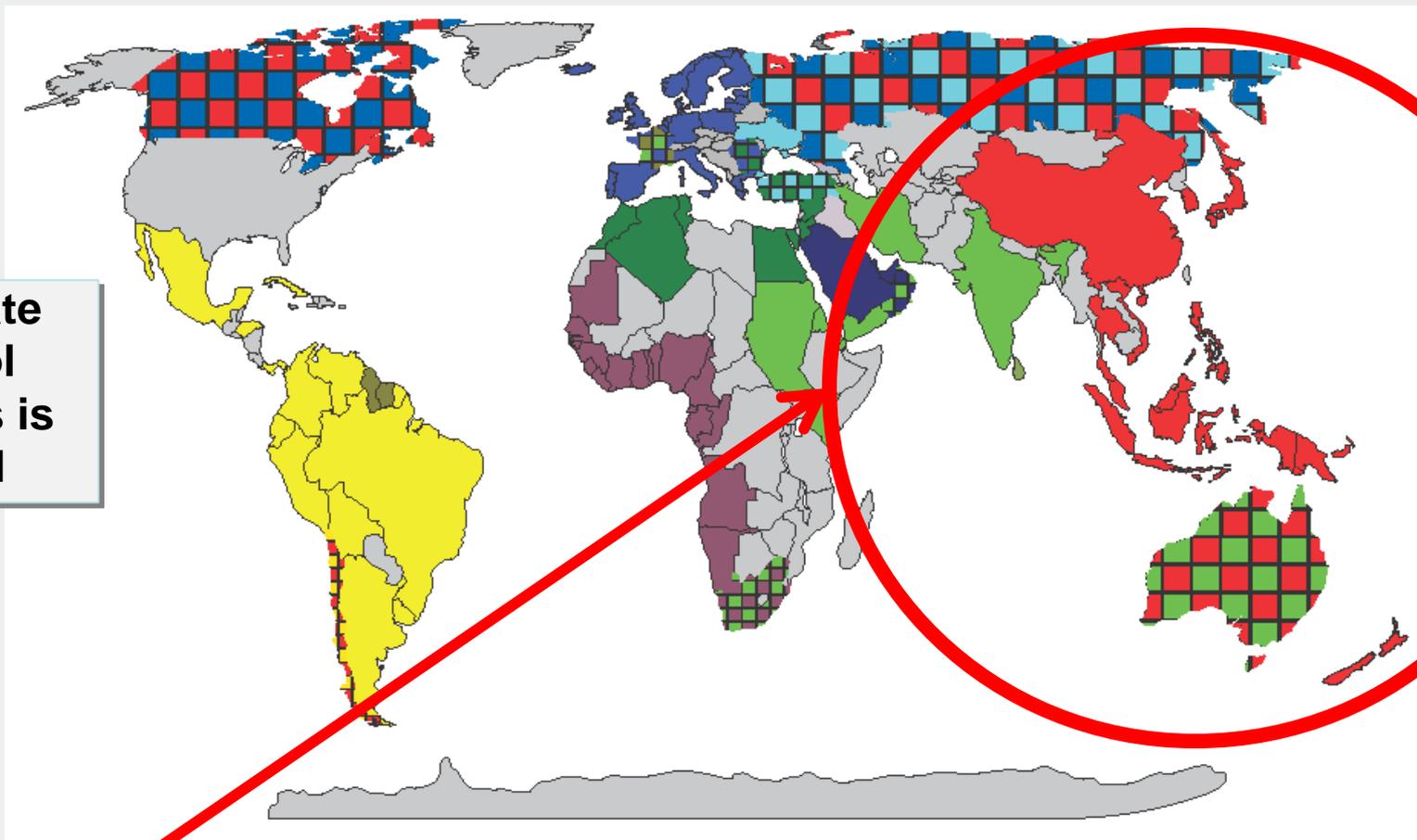
- In the case of deficiencies which are clearly hazardous to safety or to the environment, the PSCO should ensure that the hazard is removed before the ship is allowed to proceed to sea.
- Exception - If the ship is to proceed to the nearest ship repair yard for repair.

MOU Regions for PSC

PSC – Advantages of regional cooperation

- Regional coordination of PSC activities.
- Establishment of regional PSC regimes promoted by A.682(17)
- Advantage of **Memorandum of Understanding (MoU)**:
 - More effective sharing of information
 - Extended control of ships whilst trading in the region
 - Harmonised system of inspection and surveys attained
 - Unfair competition between ports in the region avoided
 - Global cooperation through inter-regional cooperation
 - Deterrent effect for sub-standard ships

Port State
Control
Regimes is
Global



Tokyo MOU
Paris MOU
Abuja MOU

Riyadh MOU
Black Sea MOU
Caribbean MOU

Indian Ocean MOU
Acuerdo Vina del Mar
Mediterranean MOU

Mediterranean MOU

- **Establishment:** The Mediterranean Region MoU signed in Malta on 11 July 1997.
- **Mission** is to eliminate the operation of sub-standard ships through a harmonized system of port State control.
- **Members:** **Algeria**, Cyprus, Egypt, Israel, Jordan, Lebanon, Malta, Morocco, Tunisia and Turkey
- **Inspections:** Annually about 6000 inspections. Carry out concentrated inspections
- **Exchange of information:** Communicate and links with IMO, Paris MOU, Black Sea MOU, etc.

MARPOL Annex VI PSC

Process

- Initial inspection
- Clear grounds
- Detailed inspection
- Detainable deficiencies

MEPC 74/18/Add.1
Annex 15, page 1

ANNEX 15

RESOLUTION MEPC.321(74)
(adopted on 17 May 2019)

2019 GUIDELINES FOR PORT STATE CONTROL
UNDER MARPOL ANNEX VI CHAPTER 3

[https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/MEPC.321\(74\).pdf](https://wwwcdn.imo.org/localresources/en/OurWork/Environment/Documents/MEPC.321(74).pdf)

Initial inspection

- It involves checking certificates and documents.
- Starting point could be the IAPP and the IEE certificates plus their supplements.
- PSCO will make sure that:
 - All equipment listed on the supplements are available
 - They have required certificates
 - Operational aspects are documented in various record books.
 - Personnel are familiar with their proper operation.
- If any **clear ground**, detail inspection could be initiated.

“Clear grounds” to conduct a more detailed inspection

1. Certificates missing or invalid
2. Supporting documents missing or invalid
3. Absence or malfunction of equipment or arrangements specified in certificates or documents
4. Presence of equipment not specified in certificates or documents
5. Serious deficiencies in certificates, documents, equipment or arrangements
6. Non-familiarity of master or crew
7. Substandard quality of fuel
8. Report or complaint informing about ship being substandard

Detailed inspection process

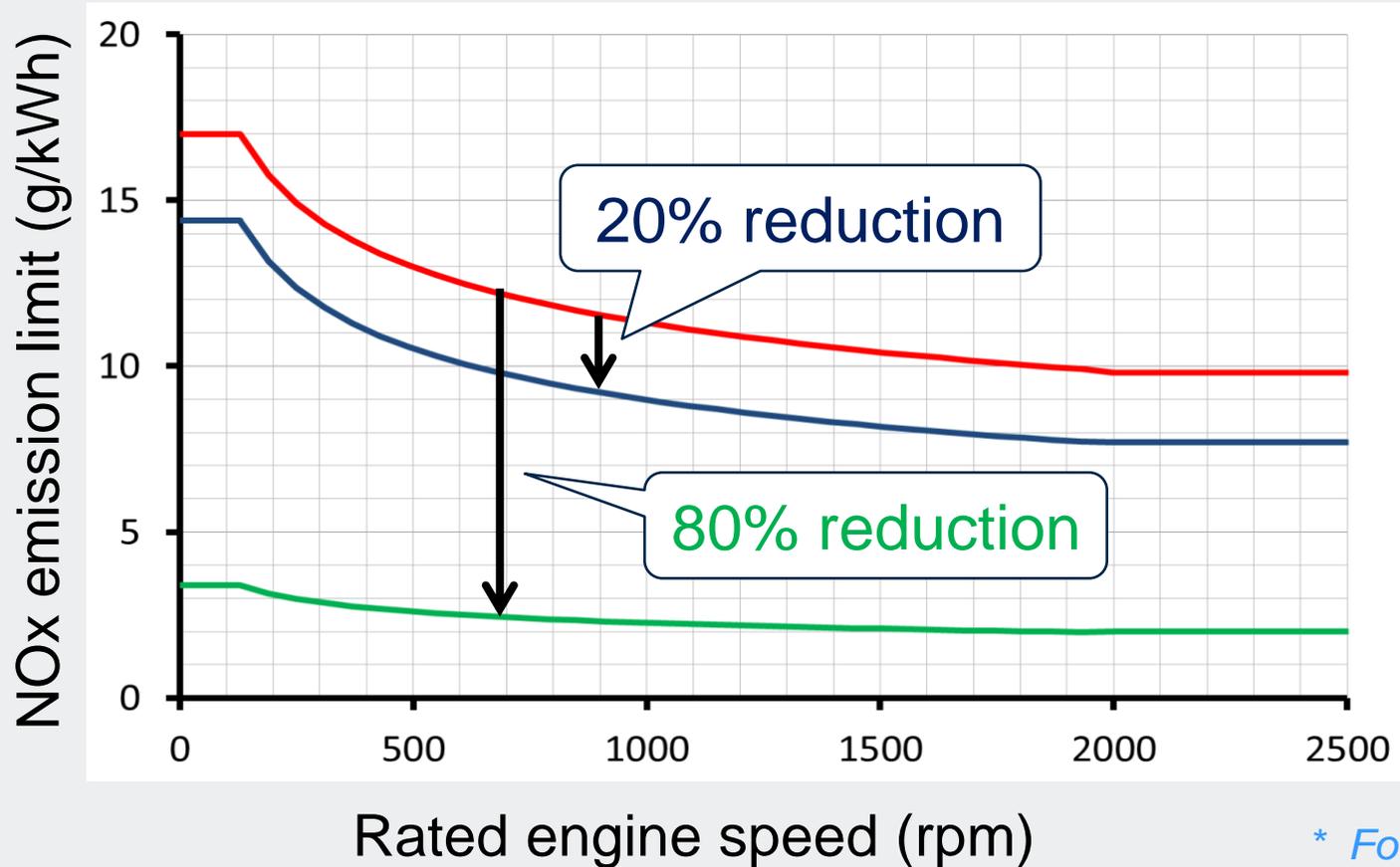
- Depends on what areas or aspect need to be inspected.
- For example, for NOx compliance, the process will be different as compared to sulphur compliance.
- Generally, the requirements of the regulation must be met.
- Therefore, the PSCO will carry out further investigation to find out if the prevailing regulations are met.

Possible detainable deficiencies for MARPOL Annex VI

- Absence of valid certificates or documents.
- A marine diesel engine on-board that does not comply with regulations.
- The sulphur content of any fuel used or found on board exceeds 0.5% m/m (or 0.1% while in ECA-SOx).
- The master or crew are not familiar with essential procedures of operation of air pollution prevention equipment (e.g. incinerators, fuel change over system, scrubber, etc.).
-
-

Port State Control for Nitrogen Oxides (NOx) (Regulation 13)

Regulation 13 - NOx emission limits



Tier I
 - Constructed on or after 1 Jan. 2000

Tier II
 - Constructed on or after 1 Jan. 2011

Tier III*
 - Constructed on or after 1 Jan. 2016
 - Applied in ECAs
 - Tier II applied outside of ECAs

** For a ship operating within North American ECA and US Caribbean Sea Area ECA*

All engines > 130 kW

PSC: Initial inspection on NO_x

Ascertain the existence of the following documents:

- IAPP certificate and its supplement with details of all applicable engines
- EIAPP certificate
- NO_x Technical File
- Record Book of Engine Parameters
- Record Book for Tier II or III information on ECA-NO_x changeovers of settings
- Approved Method file for post-1990: Pre-2000 ships.

At the same time, ascertain that the crew are familiar with the above requirements

NO_x : Detailed inspection

- **Deeper examination of the EIAPP Certificates, NOx Technical Files , Record Book of Engine Parameters, maintenance records:**
 - Purpose is to confirm that they are accurate
 - If the engine is used with correct settings / part / etc.
 - If crew are familiar with how to operate the engine.
- **Questions to be clarified (examples):**
 - Has there been any major conversion?
 - Has emergency diesel engine used for non emergency?
 - Are there any additional engines on board?
 - Are main components such as injectors, turbochargers are conforming to NOx Technical File?
 - Has ECA-NOx switching recorded properly?
 - Etc.

NO_x detainable deficiencies - Examples

1. Absence of valid EIAPP Certificates or NOx Technical Files;
2. Existence of engines on-board that have undergone major conversion but not certified.
3. Existence of a diesel engine with Approved Method on a ship constructed on or after 1 January 1990 but prior to 1 January 2000, that has no **Approved Method installed.**

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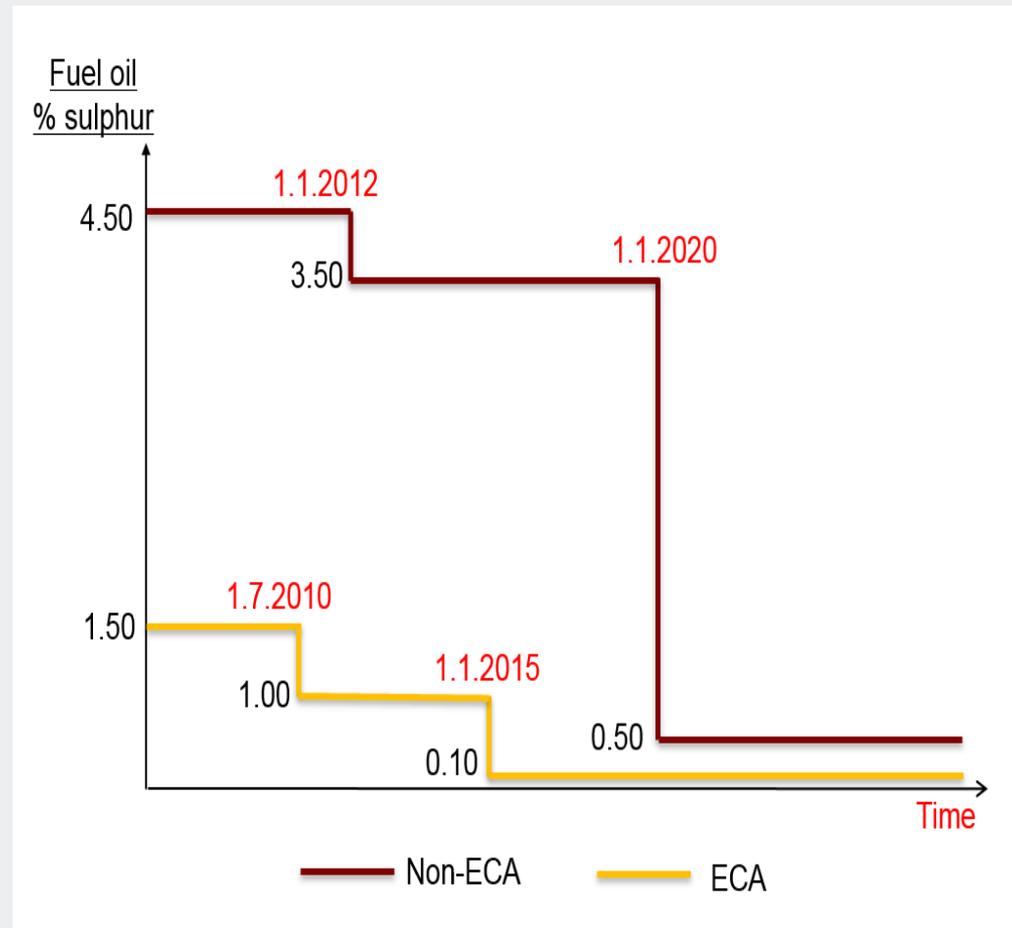
PSC for SOx and sulphur compliance (Regulations 14 and 18)

Regulatory limits on fuel sulphur

- Fuel sulphur limits are set for Global and ECA regions.

Compliance options:

- LNG
- Use compliant fuel oil (e.g. two fuel system)
- SOx scrubbers



PSC: Initial inspection of documents/certificates

- Written changeover procedure & **record of change over events** (Reg 14.6):
- Documentation related to exhaust gas cleaning systems (scrubbers), if applicable.
- Bunker Delivery Note and bunker samples (Reg. 18)
- In case of non-availability of fuel oil: Record of actions (Reg 18.2.1.1)
→ FONAR
-

PSC initial inspection for sulphur: Examination of fuel samples

- Physical examination of fuel:
 - Take sample and usual visual examination such as colour, etc.
 - Use hand held testing devices such as XRF (X-ray fluorescence spectroscopy).

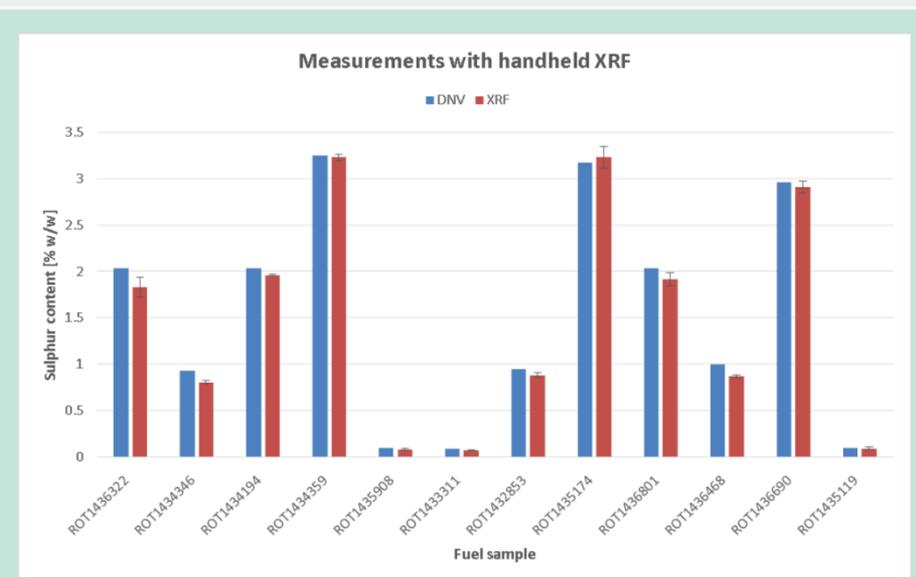


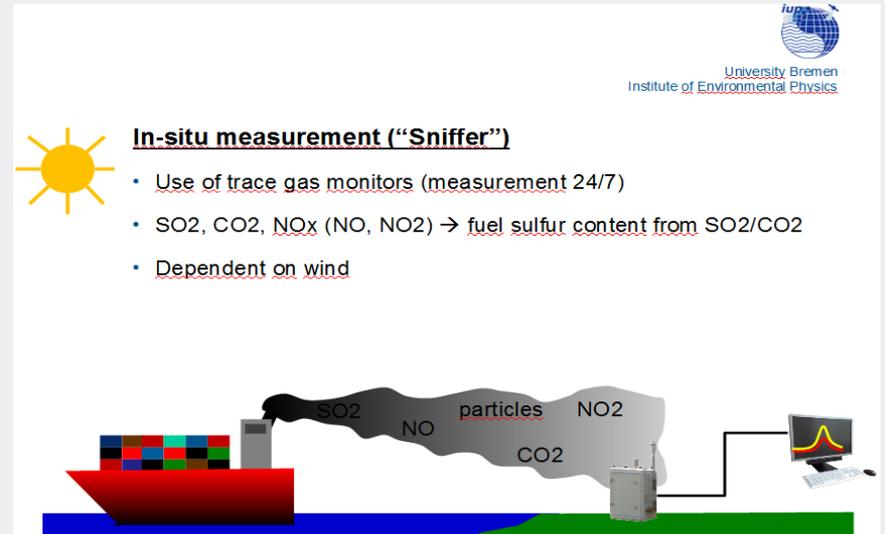
FIGURE 15
COMPARISON OF DNV REFERENCE ANALYSIS FOR SULPHUR CONTENT WITH HANDHELD XRF MEASUREMENTS ON THE SAME 12 SAMPLES.

PSC initial inspection for sulphur: Examination of exhaust gas

- Examination of exhaust gas:
 - Use of sniffers along the shipping routes
 - Use of drones or planes



Source: <https://www.theexplorer.no/solutions/using-drones-to-monitor-sulphur-emissions-from-ships/>



In-situ measurement ("Sniffer")

- Use of trace gas monitors (measurement 24/7)
- SO₂, CO₂, NO_x (NO, NO₂) → fuel sulfur content from SO₂/CO₂
- Dependent on wind



PSC: More detailed inspections

- Detailed check of documents:
 - Oil record book
 - Fuel changeover plan
 - FONAR, if applicable
 - BDNs etc.
 - Check with other flag
 - Check with fuel supplier
- **Sampling of fuel** and analysis for sulphur content

Further Guidelines and Information

Consistent implementation of 0.50% sulphur limit under MARPOL Annex VI

Summary of items on Consistent implementation:

- **Ship implementation planning guidance**
- **2019 Guidelines on consistent implementation of 0.50% sulphur limit ...**
- Other Guidance issued to support consistent implementation of 0.50% sulphur limit
- Consequential regulatory amendments approved by MEPC 74 (May 2019)
- Enforcement of sulphur limits under regulation 14 of MARPOL Annex VI
- Enhance the implementation of regulation 18 of MARPOL Annex VI, ..., including the enhancement of the GISIS to support data collection and analysis.
- Other industry guidance:
 - **Joint Industry Guidance** (OCIMF, IPIECA, IBIA et al.).
 - **Online training materials** on the subject

2019 Guidelines for consistent implementation of 0.50% sulphur limit under MARPOL Annex VI, MEPC.320(74)), May 2019

Guidelines intended for use by Administrations, port States, shipowners, shipbuilders and fuel oil suppliers. Main content:

- 1. Definitions** (DM, RM, ULSFO, VLSFO, HSHFO)
- 2. Ship implementation planning** for 2020 (referencing MEPC.1/Circ.878)
- 3. Impact on fuel and machinery systems:** distillate fuels (including distillate fuel with FAME) / Residual fuels / Key technical considerations for shipowners and operators / ISO Standard for residual fuels / Cylinder lubrication
- 4. Verification issues and control mechanism and actions:** Survey and certification by Administrations / Control measures by port States / Control on fuel oil suppliers / Information sharing related to non-compliances under MARPOL Annex VI
- 5. Fuel oil non-availability:** Guidance and information sharing on fuel oil non-availability / Standard format for reporting fuel oil non-availability (FONAR) – Appendix 1
- 6. Possible safety implications** relating to fuel oils meeting the 0.50% m/m sulphur limit – Appendix 2

Guidance on the development of a ship implementation plan

- **Guidance on the development of a *ship implementation plan* for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI (MEPC.1/Circ.878) –**
- **Issued November 2018**
 - This guidance includes an indicative plan that identifies the following key elements:
 - .1 risk assessment and mitigation plan aspects;
 - .2 fuel oil system modifications and tank cleaning aspects;
 - .3 fuel oil capacity and segregation capability;
 - .4 procurement of compliant fuel;
 - .5 fuel oil changeover plan; and
 - .6 documentation and reporting.

Guidance on FONAR

APPENDIX 1

FUEL OIL NON-AVAILABILITY REPORT (FONAR)

Note:

1 This report is to be sent to the flag Administration and to the competent authorities in the relevant port(s) of destination in accordance with regulation 18.2.4 of MARPOL Annex VI. The report shall be sent as soon as it is determined that the ship/operator will be unable to procure compliant fuel oil and preferably before the ship leaves the port/terminal where compliant fuel cannot be obtained. A copy of the FONAR should be kept on board for inspection for at least 36 months.

2 This report should be used to provide evidence if a ship is unable to obtain fuel oil compliant with the provisions stipulated in regulations 14.1 or 14.4 of MARPOL Annex VI.

3 Before filing a FONAR, the following should be observed by the ship/operator:

.1 A fuel oil non-availability report is not an exemption. According to regulation 18.2 of MARPOL Annex VI, it is the responsibility of the Party of the destination port, through its competent authority, to scrutinize the information provided and take action, as appropriate.

3.2 In the case of insufficiently supported and/or repeated claims of non-availability, the Party may require additional documentation and substantiation of fuel oil non-availability claims. The ship/operator may also be subject to more extensive inspections or examinations while in port.

3.3 Ships/operators are expected to take into account logistical conditions and/or terminal/port policies when planning bunkering, including but not limited to having to change berth or anchor within a port or terminal in order to obtain compliant fuel.

Port State Control for Energy Efficiency

General checklist for Chapter 4 PSC

- **For Initial inspection:** Check if the following exists and are valid:
 - IEE certificate
 - Ship Record of Construction (annex to IEE Certificate).
 - EEDI Technical File, its contents and validity
 - Existence of SEEMP on-board plus approved Data Collection Plan as part II of SEEMP.
 - “Statement of Compliance” for IMO Data Collection System for Fuel Oil Consumption (from 2019 onwards).
 - Also ascertain that ship master and crew are familiar with relevant documents and activities.
- **For detailed inspections:** Examine the contents of the above documents and also the ship related equipment/systems to ensure that documents are valid and existing equipment/systems are compatible with the documents.

Some aspects of detailed inspections:

- In-depth review of content of “Ship Record of Construction for Energy Efficiency” and related documented.
- Review of on-board fuel data collection process and disaggregate data and if complies with data collection plan
- General review of the ship to find out if any changes made that may be a “major conversion”.
-

Ship record of construction for energy efficiency (1)

1. Particulars of ship
2. Propulsion system

Supplement to the International Energy Efficiency Certificate (IEE Certificate)

RECORD OF CONSTRUCTION RELATING TO ENERGY EFFICIENCY

Notes:

- 1 This Record shall be permanently attached to the IEE Certificate. The IEE Certificate shall be available on board the ship at all times.
- 2 The Record shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy.
- 3 Entries in boxes shall be made by inserting either: a cross (x) for the answers "yes" and "applicable"; or a dash (-) for the answers "no" and "not applicable", as appropriate.
- 4 Unless otherwise stated, regulations mentioned in this Record refer to regulations in Annex VI of the Convention, and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

- 1.1 Name of ship
- 1.2 IMO number
- 1.3 Date of building contract
- 1.4 Gross tonnage
- 1.5 Deadweight
- 1.6 Type of ship*

2 Propulsion system

- 2.1 Diesel propulsion
- 2.2 Diesel-electric propulsion
- 2.3 Turbine propulsion
- 2.4 Hybrid propulsion
- 2.5 Propulsion system other than any of the above

* Insert ship type in accordance with definitions specified in regulation 2. Ships falling into more than one of the ship types defined in regulation 2 should be considered as being the ship type with the most stringent (the lowest) required EEDI. If ship does not fall into the ship types defined in regulation 2, insert "Ship other than any of the ship type defined in regulation 2".

Ship record of construction for energy efficiency (2)

3. Attained EEDI

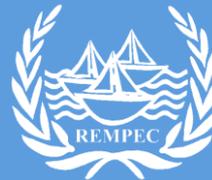
4. Required EEDI

5. SEEMP

6. EEDI Technical File

- 3 Attained Energy Efficiency Design Index (EEDI)**
- 3.1 The Attained EEDI in accordance with regulation 20.1 is calculated based on the information contained in the EEDI technical file which also shows the process of calculating the Attained EEDI.
- The Attained EEDI is: grams-CO₂/tonne-mile
- 3.2 The Attained EEDI is not calculated as:
- 3.2.1 the ship is exempt under regulation 20.1 as it is not a new ship as defined in regulation 2.23
- 3.2.2 the type of propulsion system is exempt in accordance with regulation 19.3
- 3.2.3 the requirement of regulation 20 is waived by the ship's Administration in accordance with regulation 19.4
- 3.2.4 the type of ship is exempt in accordance with regulation 20.1
- 4 Required EEDI**
- 4.1 Required EEDI is: grams-CO₂/tonne-mile
- 4.2 The required EEDI is not applicable as:
- 4.2.1 the ship is exempt under regulation 21.1 as it is not a new ship as defined in regulation 2.23
- 4.2.2 the type of propulsion system is exempt in accordance with regulation 19.3
- 4.2.3 the requirement of regulation 21 is waived by the ship's Administration in accordance with regulation 19.4
- 4.2.4 the type of ship is exempt in accordance with regulation 21.1
- 4.2.5 the ship's capacity is below the minimum capacity threshold in Table 1 of regulation 21.2
- 5 Ship Energy Efficiency Management Plan**
- 5.1 The ship is provided with a Ship Energy Efficiency Management Plan (SEEMP) in compliance with regulation 22
- 6 EEDI technical file**
- 6.1 The IEE Certificate is accompanied by the EEDI technical file in compliance with regulation 20.1
- 6.2 The EEDI technical file identification/verification number
- 6.3 The EEDI technical file verification date

REMPEC, an IMO / UNEP Centre assisting the Mediterranean coastal States in ratifying, transposing, implementing and enforcing international maritime conventions related to the protection of the marine environment



Thank you

Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC)
Maritime House, Lascaris Wharf, Valletta, VLT 1921, Malta
T: +356 21 337 296/7/8 | F:+356 21 339 951
rempec@rempec.org

www.rempec.org