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To:	All Surveyors/Auditors
Applicable to flag:	All Flags
Subject:	<b>Surveys and certifications to the Ship Energy Efficiency Plan</b>
Reference:	<b>MARPOL Annex VI</b>

**Surveys and certification relating to the Ship Energy Efficiency Management Plan (SEEMP)  
(MARPOL Annex VI Regulation 5.4.4)**

**Ship Energy Efficiency Management Plan**

Regulation 5.4 as amended by Resolution MEPC.203 (62) reads:

4. Ships to which Chapter 4 applies shall also be subject to the surveys specified below, taking into account Guidelines adopted by the Organization:

.4 For existing ships, the verification of the requirement to have a SEEMP on board according to regulation 22 shall take place at the first intermediate or renewal survey identified in paragraph 1 of this regulation, whichever is the first, on or after 1 January 2013

**Regulation 6.4 as amended by Resolution MEPC.203 (62) reads:**

4 An International Energy Efficiency Certificate for the ship shall be issued after a survey in accordance with the provisions of regulation 5.4 to any ship of 400 gross tonnage and above before that ship may engage in voyages to ports or offshore terminals under the jurisdiction of other Parties.

**Interpretation**

1. The International Energy Efficiency Certificate (IEEC) shall be issued for both new and existing ships.

2. For existing ships a Ship Energy Efficiency Management Plan (SEEMP) required in accordance with Regulation 22, shall be verified onboard according to Regulation 5.4.4, and an IEEC shall be issued, not later than the first Intermediate or Renewal MARPOL Annex VI Chapter 2 survey, whichever is the sooner, on or after 1 January 2013, i.e. a survey connected to an intermediate/renewal survey of the IAPP Certificate.

**Customer Service Center**

5201 Blue Lagoon Drive, 9<sup>TH</sup>. Floor,  
Miami, Fl., 33126  
Tel: 1 (305) 716 4116,  
Fax: 1 (305) 716 4117,  
E-Mail:

[joel@conarinagroup.com](mailto:joel@conarinagroup.com)

**Technical Head Office**

7111 Dekadine Ct.  
Spring, Tx., 77379  
Tel: 1 (832) 451 0185,  
1 (713) 204 6380

E-Mail: [cbozenovici@vcmaritime.com](mailto:cbozenovici@vcmaritime.com)

3. The Intermediate or Renewal survey referenced in 2. relates solely to the timing for the verification of the SEEMP onboard, i.e. these IAPPC survey windows will also become the IEEC initial survey date for existing ships. The SEEMP is however a survey item solely under the new MARPOL Annex VI Chapter 4, and is not a survey item relating to IAPPC surveys.

4. In the event that the SEEMP is not found onboard during the first intermediate/renewal survey of the IAPP Certificate on or after 1 January 2013, then the RO should seek the advice of the Administration concerning the issuance of an IEEC and be guided accordingly. However, the validity of the IAPP Certificate is not impacted by the lack of a SEEMP as the SEEMP is a survey item solely under the new MARPOL Annex VI, Chapter 4, and not under the IAPPC surveys.

## **EEC and SEEMP**

### *International Energy Efficiency Certificate*

#### 1. International Energy Efficiency (IEE)

Resolution MEPC.203 (62), adopted on 15 July 2011, includes REGULATIONS FOR ENERGY EFFICIENCY for ships in MARPOL Annex VI.

These are new requirements which apply in addition to the already existing requirements of MARPOL Annex VI. The regulations for energy efficiency will enter into force 01-01-2013 and apply to all ships of 400 gross tonnage and above.

#### International Energy Efficiency Certificate (IEEC)

There will be a NEW certificate: International Energy Efficiency Certificate (IEEC), which shall be issued for both new and existing ships to which chapter 4 of MARPOL Annex VI applies.

This statutory Certificate will be issued for new buildings upon the initial survey before the ship is put into service and for existing ships of 400 gross tonnage and above during intermediate or renewal survey.

The IEE Certificate will be issued once for each ship and shall be valid throughout the lifetime of the ship. The International Energy Efficiency Certificate is specific to each ship and must be kept available on board for normal inspections and audits.

#### IEEC scope for ships in service

Each existing ship shall keep on board a ship-specific Ship Energy Efficiency Management Plan. The verification of the requirement to have a SEEMP on board shall take place at the first intermediate or renewal survey whichever is the first, on or after 1 January 2013. The SEEMP is required on board starting from the time of the survey, not earlier.

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5201 Blue Lagoon Drive, 9<sup>TH</sup>. Floor,  
Miami, Fl., 33126  
Tel: 1 (305) 716 4116,  
Fax: 1 (305) 716 4117,  
E-Mail:

[joel@conarinagroup.com](mailto:joel@conarinagroup.com)

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Spring, Tx., 77379  
Tel: 1 (832) 451 0185,  
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E-Mail: [cbozenovici@vcmaritime.com](mailto:cbozenovici@vcmaritime.com)

For ships in service, the IEEC initial survey will be in connection with an intermediate/renewal survey of the IAPP certificate, i.e. these IAPP survey windows will also become the IEEC initial survey date for existing ships. An approval of the SEEMP by class in advance to the intermediate or renewal survey is not required.

The Ship Energy Efficiency Management Plan is regulated in MARPOL 73/78, Annex VI, Chapter 4, Regulation 22. The SEEMP provides an approach on an operational basis by monitoring ship and fleet efficiency performance.

The SEEMP lists the measures which are used for improving the energy efficiency of a ship. Upon the survey, the surveyor will check if the SEEMP is available on board. The SEEMP should be established in a working language used on board. The SEEMP should be written in the same language as the majority of the other documents on board. A sample form of the SEEMP can be found in "IMO Resolution MEPC.213 (63) – 2012 Guidelines for the development of a Ship Energy Efficiency Management Plan".

The ship owner is obliged to develop a SEEMP taking into account the guidelines adopted by the International Maritime Organization. The Ship Energy Efficiency Management Plan may form a part of the ship's safety management system. The ship owner assumes full responsibility that each ship of their fleet keeps a ship-specific Energy Efficiency Management Plan.

In case of the existence of the SEEMP on board an existing ship, the International Energy Efficiency Certificate (IEEC) is issued. In case of a missing SEEMP, the recognized organization should seek the advice of the Administration concerning the issuance of an IEEC. However if the SEEMP is missing, it has NO effect on the International Air Pollution Prevention (IAPP) certificate.

## **2. Ship Energy Efficiency Management Plan and Energy Efficiency Operational Indicator**

The Ship Energy Efficiency Management Plan (SEEMP) is an operational measure that establishes a mechanism to improve the energy efficiency of a ship in a cost-effective manner. The SEEMP also provides an approach for shipping companies to manage ship and fleet efficiency performance over time using, for example, the Energy Efficiency Operational Indicator (EEOI) as a monitoring tool. The guidance on the development of the SEEMP for new and existing ships incorporates best practices for fuel efficient ship operation, as well as guidelines for voluntary use of the EEOI for new and existing ships (MEPC.1/Circ.684).

The EEOI enables operators to measure the fuel efficiency of a ship in operation and to gauge the effect of any changes in operation, e.g. improved voyage planning or more frequent propeller cleaning, or introduction of technical measures such as waste heat recovery systems or a new

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Fax: 1 (305) 716 4117,  
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[joel@conarinagroup.com](mailto:joel@conarinagroup.com)

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Tel: 1 (832) 451 0185,  
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E-Mail: [cbozenovici@vcmaritime.com](mailto:cbozenovici@vcmaritime.com)

propeller. The SEEMP urges the ship owner and operator at each stage of the plan to consider new technologies and practices when seeking to optimize the performance of a ship. Such efficiency measures will significantly reduce fuel consumption and, consequently, CO2 emissions.

A SEEMP must not be another “paper” but a tool, for ship energy optimization, therefore becomes an ideal opportunity to cut fuel costs by increasing the energy efficiency of the ship.

### **3. Interpretation of SEEMP requirements:**

A SEEMP should be provided on all ships of 400 GT and above and for existing ships it should be provided at the IEEC intermediate or renewal survey.

A SEEMP is not required to be on board before the first renewal/intermediate survey of the IAPP certificate after 1 January 2013.

The SEEMP should be established in a working language understood by the ship’s personnel. The SEEMP shall be developed taking into account guidelines adopted by the Organization. (Resolution MEPC.213 (63))

The SEEMP can be part of the Safety Management System (SMS) and the ISM audit, **but does not need to be approved by the flag or RO.**

The SEEMP can either be hard copy or electronic.

Class societies should check whether the SEEMP is ships specific and based on Resolution MEPC.213 (63).

If the SEEMP is missing, it has no effect on the International Air Pollution Prevention (IAPP) certificate.

### **4. Energy Efficiency Design Index (EEDI)**

The EEDI is required only for ship new buildings. The term “new ship” is well defined as a ship for which the building contract is placed on or after 1 January 2013; or in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2013; or the delivery of which is on or after 1 July 2015.

The EEDI is required only for the following ship types of 400 gross tonnage and above:

Bulk Carrier

Gas Carrier

Tanker

Container Ship

Refrigerated Cargo Ship

General Cargo Ship

Combination Carrier

The EEDI Technical File contains the technical documentation which proves that the energy efficiency of the ship (= attained EEDI) is below the allowed limit (= required EEDI).

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The EEDI Technical File has to be approved by the recognized organization or a classification society on their behalf.

In the future the required EEDI shall be reduced stepwise. The future EEDI reduction factors, cut off limits and implementation phases against the ship specific reference lines are intended to be as in the EEDI – reduction factor scheme. (MARPOL Annex VI Reg 21) The attained as well as the required EEDI do not yet apply to ships which have diesel electric propulsion, turbine propulsion or hybrid propulsion systems. However the introduction of non-conventional propulsion systems and further ship types under the EEDI regime are considered by the IMO.

### **Survey and Certification**

The EEDI related procedures on survey and certification are regulated in “IMO Resolution MEPC.214 (63) – Guidelines on survey and certification of the Energy Efficiency Design Index” and “MEPC 64/INF.22 – First version of industry guidelines on calculation and verification of the Energy Efficiency Design Index”.

The verification stages for IEE Certification can be divided into the application for IEE certification, the EEDI preliminary verification, the EEDI final verification and the issuance of the IEEC.

More information

MEPC.213(63) guideline for the development of a ship energy efficiency management plan (SEEMP)

REFERENCES:

- **MARPOL Annex VI Regulation 5.4.4**

ATTACHMENTS: No.

Kindest Regards,  
Cosmin Bozenovici  
Naval Architect – Conarina Technical Head Office

#### **Customer Service Center**

5201 Blue Lagoon Drive, 9<sup>TH</sup>. Floor,  
Miami, Fl., 33126  
Tel: 1 (305) 716 4116,  
Fax: 1 (305) 716 4117,  
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