

標題

IMO-DCS の報告項目追加及び SEEMP Part II の改正
と早期適用旗国について

ClassNK

テクニカル インフォメーション

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各位

第 81 回海洋環境保護委員会 (MEPC 81) において、MARPOL 附属書 VI が改正され、DCS 規則における追加の報告項目が承認されました。その後、第 82 回海洋環境保護委員会 (MEPC 82) において、適用に関するガイダンスが承認され、適用スケジュールが確定しましたのでお知らせいたします。

1. IMO-DCS における報告項目の追加概要

以下の項目が新たに報告項目に含まれます。

- 排出源の種類及び燃料の種類ごとの燃料油消費量（主機、補機等を含む）
- 排出源の種類及び燃料の種類ごとの非航海中の燃料油消費量
- 貨物積載時の航行距離（任意ベース）
- 船舶に供給される陸上電力
- 貨物輸送量（トンマイル等）
- 革新的技術の導入の有無

関連する IMO 文書は以下の URL にてご確認ください。

MEPC Resolution 385(81)

MARPOL 条約附属書 VI の改正:

https://www.classnk.or.jp/hp/pdf/activities/statutory/seemp/eexi_MEPC_385_81.pdf

MEPC Resolution 388(81)

2022 年船舶エネルギー効率管理計画書の作成に関するガイドラインの改正:

<https://www.classnk.or.jp/hp/pdf/activities/statutory/seemp/seemp-mepc81-388.pdf>

2. 適用スケジュールとお手続き

MEPC.1 Circ.913 に従い、以下の通りのスケジュールにて追加の報告項目を含むデータ収集の開始をお願いいたします。

2025 年 8 月 1 日時点で就航済みの船舶 :
2025 年 8 月 1 日以降に完工する船舶 :

2026 年 1 月 1 日から開始
完工時点から開始

(次頁に続く)

NOTES:

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なお、新しい報告項目を含むデータ収集フォーマットは本年中に ClassNK MRV Portal でダウンロード可能となります。リリースの際に別途お知らせいたします。

<https://www.classnk.or.jp/hp/pdf/activities/statutory/seemp/MEPC.1-Circ.913.pdf>

また、上記の追加の報告項目を含むデータ収集を開始する前に、SEEMP Part II の改正を行い、旗国もしくは代行機関の承認を受ける必要があります。従いまして、2025 年 8 月 1 日時点の既存船は 2025 年内、2025 年 8 月 1 日以降に完工する船舶は就航前に、新フォーマットによる SEEMP Part II の承認を受けることとなります。

2025 年前半中に、ClassNK MRV Portal でダウンロードいただける SEEMP Part II のフォーマットを改正し、上記提出にご利用いただけるように準備いたします。別途お知らせいたしますので少々お待ちください。

3. 早期適用旗国とスケジュール

本条約改正におきましては、旗国によって早期適用を求めることができると定められており、その場合、当該旗国の要求する日付以前に SEEMP Part II の改正と追加項目を含むデータ収集を開始する必要があります。

現時点で早期適用を強制要件とする指示は、どの旗国からも受領しておりませんが、受領した際には速やかにお知らせいたします。

なお、本件に関してご不明な点は、以下の部署にお問い合わせください。

一般財団法人 日本海事協会 (ClassNK)

本部 管理センター 環境部 DCS 部門

住所: 東京都千代田区紀尾井町 4-7 (郵便番号 102-8567)

Tel.: 03-5226-3025

Fax: 03-5226-3026

E-mail: dcs@classnk.or.jp

添付:

1. 改正 SEEMP Part II フォーマット例

SHIP FUEL OIL CONSUMPTION DATA COLLECTION PLAN

(PART II OF THE SEEMP)

1 Review and update log

Date/timeline	Updated parts	Developed by	Implemented by
yyyy/mm/dd	Newly developed	Technical Dept.	Technical Dept.
yyyy/mm/dd	Revised to update for IMO MEPC Res.388(81)	Technical Dept.	Technical Dept.

2 Ship Particulars

Name of the ship			
IMO number			
Company			
Flag			
Year of delivery			
Ship Type			
Gross Tonnage			
NT			
DWT			
Attained EEDI (if applicable)			
Attained EEXI (if applicable)			
Ice class			

3 Record of revision of Fuel Oil Consumption Data Collection Plan

Date of revision	Revised Provision
yyyy/mm/dd	Newly developed
yyyy/mm/dd	Revised to update for IMO MEPC Res.388(81)

4 Ship engines and other fuel oil consumers and fuel oil types used

No.	Engines or other fuel oil consumers	Power	Fuel oil types
1	Main Engine (maker type)	9000 (kW)	HFO, LFO, MGO, Bio fuel
2	Aux. Engine No.1 (maker type)	800 (kW)	HFO, LFO, MGO, Bio fuel
3	Aux. Engine No.2 (maker type)	800 (kW)	HFO, LFO, MGO, Bio fuel
4	Aux. Engine No.3 (maker type)	800 (kW)	HFO, LFO, MGO, Bio fuel
5	Boiler (maker type)	1.0 ton/h	HFO, LFO, MGO, Bio fuel
6	Inret Gas Generator (maker type)		MGO
7	Gas Conbustion Unit (maker type)		LNG

5 Emission factors:

Fuel oil Type	C _F (t-CO ₂ / t- Fuel)
Diesel/Gas Oil (Reference: ISO 8217 Grades DMX through DMB)	3.206
Light Fuel Oil (Reference: ISO 8217 Grades RMA through RMD)	3.151
Heavy Fuel Oil (Reference: ISO 8217 Grades RME through RMK)	3.114
Liquefied Petroleum Gas (Propane)	3.000
Liquefied Petroleum Gas (Butane)	3.03
Liquefied Natural Gas	2.750
Methanol	1.375
Ethanol	1.913
Bio fuel	*1
Other fuel	*2

CF is a non-dimensional conversion factor between fuel oil consumption and CO2 emission in the 2022 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships (resolution MEPC.364(79)), as amended. The annual total amount of CO2 is calculated by multiplying annual fuel oil consumption and CF for the type of fuel.

*1) Cf of bio fuel shall be determined in accordance with MEPC.1/Circ.905 INTERIM GUIDANCE ON THE USE OF BIOFUELS UNDER REGULATIONS 26, 27 AND 28 OF MARPOL ANNEX VI (DCS AND CII)

*2) A CF-factor for the respective product supported by documentary evidence should be provided.

6 Methods to measure fuel oil consumption

6.1 Measurement procedure, aggregation and calculation method of annual value in calendar year

No.	Engines or other fuel oil consumers	Method	Description
	Total fuel consumption	Method 3: method using bunker fuel oil tank monitoring on board	<p>To determine the annual fuel oil consumption, the amount of daily fuel oil consumption data measured by tank readings which are carried out by appropriate methods such as automated systems, soundings and dip tapes will be aggregated.</p> <p>The tank readings will normally occur daily when the ship is at sea and each time the ship is bunkering or de-bunkering.</p> <p>The summary of monitoring data containing records of measured fuel oil consumption should be available on board.</p>
1	Main Engine (maker type)	Method 2: method using flow meters	<p>Annual fuel oil consumption to be the sum of daily fuel oil consumption data of all relevant fuel oil consuming processes on board measured by flow meters.</p> <p>Amount for each type of fuel consumed from previous daily report for each navigation condition (at sea, at berth, at anchoring) to be recorded.</p> <p>The amount to be calculated based on fuel flow meter as per; The following formula to be used: (FOC measured by flow meter) [KL] × (density) [g/cm3] × (volume conversion factor) = FOC (MT)</p> <p>- The density [unit : g/cm3] to be confirmed by the fuel supplier (described in BDN).</p> <p>- FOC to be measured at 15°C. For the correction for temperature at 15°C, the volume conversion factor described in "attached conversion table II 2B".</p>
2	Aux. Engine No.1 (maker type)	Method 7: method using estimated fuel oil consumption for A/E	<p>Following calculation method is used for FOC;</p> <p>"SFOC (g/kWh)" x "Number of running A/E" x "A/E output (kW)" x "Running hours" x 10⁻⁶ (ton)</p>
3	Aux. Engine No.2 (maker type)	Method 8: method using estimated fuel oil consumption for Boiler or other	<p>Following calculation method is used for FOC;</p> <p>"SFOC (kg/hour)" x "Running hours" x 10⁻³ (ton)</p>
4	Inert Gas Generator	Method 6: method using subtraction	<p>The fuel consumption of this consumer type will be derived by subtracting the fuel consumption of the other consumer types from the total annual fuel oil consumption measured</p>
5	Gas Combustion Unit	Method 2: method using flow meters	<p>Annual fuel oil consumption to be the sum of daily fuel oil consumption data of all relevant fuel oil consuming processes on board measured by flow meters.</p> <p>Amount for each type of fuel consumed from previous daily report for each navigation condition (at sea, at berth, at anchoring) to be recorded.</p> <p>The amount to be calculated based on fuel flow meter as per; The following formula to be used: (FOC measured by flow meter) [KL] × (density) [g/cm3] × (volume conversion factor) = FOC (MT)</p>

6.2 Flow meters identification/specification and their link to fuel oil consumers

Elements applied to fuel consumers	Flow meter's Specification
Main Engine	Maker: Type:
Aux. Engines (FO line inlet)	Maker: Type:

Aux. Engines (FO line outlet)	Maker: Type:
Aux. Engines (MGO line)	Maker: Type:
Boiler	Maker: Type:
Inert gas Generator	Maker: Type:
Gas Combustion Unit	Maker: Type:

6.3 Calibration of the flow meter

Chief engineer checks the soundness of measurement device regularly according to the following method.

- Compare the data of Fuel Oil Consumption and Remaining On Board for each voyage.

- In addition to the above procedure, measure the fuel oil tank level (tank sounding) and fuel temperature and calculate the actual volume and record it in the engine logbook or tank sounding report. Compare this actual volume with the remaining volume in the engine logbook or tank sounding report as calculated from the flow meter value and check if for any major discrepancy.

7 Method to measure distance travelled including laden distance

Description
Data source is record in deck log book obtained from GPS or ECDIS or Paper chart. Annual value of distance travelled, over ground, to be integrated from daily records in Noon report, Departure Report and Arrival Report. Each noon/Departure/Arrival reports shall include cargo carried mass (MT) and/or No of TEU and/or No of Passengers then total laden distance and total transport work can be aggregated.

8 Method to measure hours under way

Description
Data source is record in deck log book. Annual value of hours underway to be integrated from daily records in noon report.

9 Method to measure total amount of onshore power supplied

Description
Total amount of onshore power supplied should be calculated as the sum of amount of onshore power supplied in kWh. The amount of onshore power supplied should be recorded based on relevant document by power supplier. The document should be stored. This information as shown on the bill from the port or electricity provider could be included in the electronic record.

10 Method to measure transport work

Description
Definition of transport work per voyage is; containerships: cargo mass (MT) x distance (nm) and No of Containers x distance (nm) Cruise Passenger: No of Passengers x distance (nm) Ro-Ro Passenger: cargo mass (MT) x distance (nm) and No of Passengers x distance (nm) Any other: cargo mass (MT) x distance (nm)

11 Data quality

Description	
Data quality control measures: Internal reviews and validation of relevant data	<p>Companies should assess the quality of the information in the aggregated report before submitting the report for verification.</p> <p>.1. Responsibility of Internal reviews and validation Company shall assign a person who has enough knowledge and experience on the ship data management as responsible person for internal review and validation (hereafter Internal Reviewer).</p> <p>.2. Contents of internal review and validation Internal Reviewer shall review whether the reported data is complying with Regulation and show a brief description identifying that the review and validation process includes a check on whether;</p> <ul style="list-style-type: none"> - data is complete - comparison with data over previous years - comparison of fuel consumption reported with purchase records - comparison of factors obtained for fuel suppliers with international reference factors - and, criteria for rejecting data, if applicable
Additional measures to be considered: Data gap	<p>(1) Data gap on FOC In case where the fuel consumption cannot be confirmed due to missing of the engine logbook, flow meter malfunction etc., Internal Reviewer shall take countermeasures for deciding the value of fuel consumption by means of checking BDN and measurement record of fuel consumption which has been done before and after bunkering and at the time of departure and arrival.</p> <p>(2) Data gap on distance travelled and/or hours underway In case where the distance travelled/hours underway cannot be confirmed due to missing of the deck logbook etc., Internal Reviewer shall take countermeasures for deciding distance travelled by ECDIS or Paper Chart and etc. In certain circumstances, Internal Reviewer may calculate based on port departure time and port arrival time.</p>

12 Processes that will be used to report the data to the Administration

Description	
<p>The vessel prepares electronic "Abstract Log" based respectively on the Deck log book and Engine log book every day at noon.</p> <p>Fuel consumption and other relevant data is recorded manually on board. The vessel is reporting the data in electronic form daily to the office in the standardized reporting format; the data is then stored, processed, and analyzed ashore.</p> <p>After the end of calendar year, Company aggregates the data into annual value and reports the data to the Administration or RO for verification. In addition, the relevant underlying data will be exported to IT System established by Administration / RO for verification according to requirements.</p> <p>(Overview)</p> <div style="display: flex; align-items: center; justify-content: center; gap: 20px;"> <div style="border: 1px solid black; padding: 10px; text-align: center;">Vessel Send Noon report</div> <div>>>></div> <div style="border: 1px solid black; padding: 10px; text-align: center;">Data is processed on IT system (ABLOG system)</div> <div>>>></div> <div style="border: 1px solid black; padding: 10px; text-align: center;">Company (Department) Data quality control</div> <div>>>></div> <div style="border: 1px solid black; padding: 10px; text-align: center;">Company Reporting for verification</div> </div>	