

# MEPC.348(78)

## 2022 年船舶燃油消耗數據和營運碳強度主管機關驗證準則

### – 內容摘要



#### ◆ 目的

為因應營運碳強度指標(CII)納入 MARPOL 附錄 VI 為強制性法規，此為國際海事組織(IMO)針對主管機關驗證船舶燃油消耗數據及營運碳強度所制定的準則，旨在幫助主管機關制定自己的驗證計劃。IMO 亦提請各會員國納入國家法令時，應充分考量此準則，也同步向船長、海員、船東、船舶營運者或其他相關利益方告知此準則的內容及處理方式。

#### MEPC.348(78)決議案已取代 MEPC.292(71)決議案

#### ◆ 內容摘要

- 一、準則共分六個部分，分別為介紹、定義、責任、報告數據的驗證、年度 CII 達成值的驗證及 CII 等級評分的確定、簽發符合聲明。
- 二、根據 MARPOL 附則 VI 規定的船舶燃油消耗和營運碳強度等級數據收集系統，主管機關可授權認可組織從船舶接收數據，驗證數據是否符合要求，驗證年度營運 CII 達成值與年度營運 CII 的要求值，確定營運碳強度的評分等級，簽發符合聲明書，並將數據提交給 IMO。
- 三、為便於船舶燃油消耗數據及年度營運 CII 達成值的驗證，主管機關應說明船舶應連同其年度數據報告提交哪些附屬文件，提交格式可參考附錄 1 燃油交付單(BDN)統計表及附錄 2 燃油消耗匯集數據統計表之範本。如果自發性的應用了一項或多項試驗 CII 指標(例如 EEPI、cbDIST、clDIST 或 EEOI)，則應參考附錄 2-1 的範本中記錄相關匯集數據。
- 四、主管機關可要求其管轄下的船舶提交船舶年度燃油消耗量、航行距離和航行時數等審查所需的文件。主管機關可使用這些文件來驗證船舶是否遵循其數據收集計劃中規定的方法，以確認報告數據和計算值的一致性、完整性、可靠性和準確性。

- 五、主管機關應使用全年度的數據驗證年度營運 CII 達成值，如因為某些原因無法取得全年度數據資料，例如新船在 1 月 1 日之後才交船，則應驗證交船後到該年度年底的數據並確認年度營運 CII 達成值。
- 六、對於具有多條載重線證書或載重線證書包含多條載重線的船舶，應使用最高載重值計算和驗證年度營運 CII 要求值及達成值。
- 七、對於在年度內永久改變載重噸 ( DWT ) 或總噸位 ( GT ) 的船舶，在 SEEMP 或矯正行動計劃中可視為提高船舶營運破強度能效而採取的措施。但應注意下列規定：
1. 應使用改裝前的原始 DWT 或 GT 值計算和驗證年度營運 CII 的要求值；但是，用於評估年度 CII 達成值應使用改裝後新的 DWT 或 GT 值計算和驗證；和
  2. 對於進行改裝的年度，應根據改裝前後行駛距離加權的平均 DWT 或 GT 值計算和驗證整個年度所達到的年度營運 CII 達成值。
- 八、如果年度營運 CII 達成值剛好落在一個等級界線上，則該船應被評定為兩個等級中較好的一個。
- 九、如果船舶更換旗國或是公司時，前一個主管機關無需驗證到轉移前之年度營運 CII 達成值，也無需確定船舶年度 CII 的評分等級。轉移後的主管機關應使用整個日曆年度的數據驗證年度營運 CII 的達成值。在這種情況下，在轉移前年度運行 CII 達成值計算所需的統計數據，應該已經由前一個主管機關驗證，可以直接給被轉移後的主管機關使用而無需進一步驗證，格式樣本可參考附錄 3 和附錄 3-1。
- 十、主管機關或其授權認可組織在收到船舶燃油消耗數據及年度營運 CII 達成值並完成驗證後，符合聲明應由主管機關簽發。但在船舶年度營運 CII 達成值評級不佳而需制定矯正措施計劃；或是主管機關在報告的數據或年度營運 CII 的達成值及要求值的計算中發現任何重大差異，未及時澄清或更正時；不應先行簽發符合聲明。

## 十一、 附錄 1 燃油交付單統計表樣本

## APPENDIX 1

## SAMPLE OF THE BDN SUMMARIES

| Date of Operations<br>(dd/mm/yyyy)       | Fuel Oil Type/Mass(MT) |     |     |        |        |     |          |         |            | Descriptions   |
|--|------------------------|-----|-----|--------|--------|-----|----------|---------|------------|--|
|  | DO/GO                  | LFO | HFO | LPG(P) | LPG(B) | LNG | Methanol | Ethanol | Others(Cr) |  |
| ① BDN                                    |                        |     |     |        |        |     |          |         |            |  |
| 09/01/2023                               |                        |     |     |        |        |     |          |         |            |  |
| 02/05/2023                               |                        |     | 150 |        |        |     |          |         |            |  |
| 08/07/2023                               |                        |     |     |        |        |     |          |         |            |  |
| 09/10/2023                               |                        |     |     |        |        |     |          |         |            |  |
| 10/12/2023                               |                        |     | 300 |        |        |     |          |         |            |  |
| ①Annual Supply Amount                    | 0                      | 0   | 450 | 0      | 0      | 0   | 0        | 0       | 0          |  |
| ② Correction for the tank oil remainings |                        |     |     |        |        |     |          |         |            |  |
| 01/01/2023                               |                        |     | 400 |        |        |     |          |         |            |  |
| 31/12/2023                               |                        |     | 200 |        |        |     |          |         |            |  |
| ②Correction for the tank oil remaining   | 0                      | 0   | 200 | 0      | 0      | 0   | 0        | 0       | 0          | The difference in the amount of the remaining tank oil at the beginning/end of the data collection period. |
| ③ Other corrections                      |                        |     |     |        |        |     |          |         |            |  |
| 30/03/2023                               |                        |     |     |        |        |     |          |         |            |  |
| 15/09/2023                               |                        |     |     |        |        |     |          |         |            |  |
| 31/12/2023                               |                        |     |     |        |        |     |          |         |            |  |
| ③Annual other corrections                | 0                      | 0   | 0   | 0      | 0      | 0   | 0        | 0       | 0          |  |
| Annual Fuel Consumption                  |                        |     |     |        |        |     |          |         |            |  |
| Annual Fuel Consumption (①+②+③)          | 0                      | 0   | 650 | 0      | 0      | 0   | 0        | 0       | 0          |  |

Explanatory remarks:  
If bunker supply/correction data have been recorded in a Company's electronic reporting system,the data is acceptable to be submitted in the existing format instead of submitting the data by this format.

## 十二、 附錄 2 燃油消耗匯集數據統計表之範本

## APPENDIX 2

## SAMPLE OF THE COLLECTED DATA SUMMARIES

| Date and time from<br>(dd/mm/yyyy;<br>hh:mm UTC) | * Date and time to<br>(dd/mm/yyyy;<br>hh:mm UTC) | Distance travelled<br>(n.m) | Hours under way<br>(hh:mm) | **exceptional conditions specified in regulation 3.1 of MARPOL Annex VI (Y/N) | **Sailing in ice condition (Y/N) | **STS Operation (Y/N) | Fuel consumption (metric tons) |     |       |     |       |     |       |                                      |       |     |  |  |  |
|--|--|-----------------------------|----------------------------|---|----------------------------------|-----------------------|--------------------------------|-----|-------|-----|-------|-----|-------|--------------------------------------|-------|-----|--|--|--|
|  |  |                             |                            |   |                                  |                       | total mass                     |     |       |     |       |     |       | **mass to be deducted from the total |       |     |  |  |  |
|  |  |                             |                            |   |                                  |                       | DO/GO                          | ... | DO/GO | ... | DO/GO | ... | DO/GO | ...                                  | DO/GO | ... |  |  |  |
| 01/01/2023 00:00                                 | 01/01/2023 13:20                                 | 150                         | 13:20                      | N   | N                                | N                     |                                |     |       |     |       |     |       |                                      |       |     |  |  |  |
| 01/01/2023 13:20                                 | 01/01/2023 24:00                                 | 60                          | 10:40                      | N   | Y                                | N                     |                                |     |       |     |       |     |       |                                      |       |     |  |  |  |
| 02/01/2023 00:00                                 | 02/01/2023 24:00                                 | 288                         | 24:00                      | N   | N                                | Y                     |                                |     |       |     |       |     |       |                                      |       |     |  |  |  |
| 03/01/2023 00:00                                 | 03/01/2023 24:00                                 | 260                         | 24:00                      | N   | N                                | Y                     |                                |     |       |     |       |     |       |                                      |       |     |  |  |  |
| .....  | .....  | .....                       | .....                      | .....   | .....                            | .....                 |                                |     |       |     |       |     |       |                                      |       |     |  |  |  |
| .....  | .....  | .....                       | .....                      | .....   | .....                            | .....                 |                                |     |       |     |       |     |       |                                      |       |     |  |  |  |
| 31/12/2023 00:00                                 | 31/12/2023 24:00                                 | 290                         | 24:00                      | N   | N                                | N                     |                                |     |       |     |       |     |       |                                      |       |     |  |  |  |
| Annual total                                     |  |                             |                            |   |                                  |                       |                                |     |       |     |       |     |       |                                      |       |     |  |  |  |

\* In the case of daily underlying data, this column would be left blank.

\*\* Refer to the 2022 Interim guidelines on correction factors and voyage adjustments for CII calculations (G5), adopted by resolution MEPC.355(78). Supporting documentation may be additionally submitted to facilitate the verification when necessary, such as Baplie files where the number of in-use reefer containers on board are recorded. Note that voyages in different sailing or operational conditions should be recorded in separate rows so that the correction factors and voyage adjustments can be duly calculated and verified.

\*\*\* Refer to fuel types specified in the 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships (resolution MEPC.308(73), as may be amended)

Explanatory remarks: If bunker supply/correction data have been recorded in a company's electronic reporting system, the data is acceptable to be submitted in the existing format instead of submitting the data by this format.

十三、 附錄 2-1 在自發性的基礎上計算試驗破強度指標相關匯集數據範本

APPENDIX 2 – ADD.1

SAMPLE OF THE COLLECTED DATA SUMMARIES TO CALCULATE TRIAL CII ON A VOLUNTARY BASIS

The following aggregated data should be additionally included in the table in appendix 2, if one or more trial CII metrics have been applied on a voluntary basis:

| Date from (dd/mm/yyyy) | *Date to (dd/mm/yyyy) | Laden distance travelled (n.m) | ****Transport work (metric of transport work) |
|------------------------|-----------------------|--------------------------------|---|
| 01/01/2023             |                       |                                |   |
| 02/01/2023             |                       |                                |   |
| 03/01/2023             |                       |                                |   |
|                        |                       |                                |   |
|                        |                       |                                |   |
| 31/12/2023             |                       |                                |   |
| Annual total           |                       |                                |   |

\* In the case of daily underlying data, this column would be left blank.

\*\*\*\* As defined in section 3 of the *Guidelines for voluntary use of the ship energy efficiency operational indicator (EEOI)* circulated by MEPC.1/Circ.684.

Explanatory remarks: If bunker supply/correction data have been recorded in a Company's electronic reporting system, the data is acceptable to be submitted in the existing format instead of submitting the data by this format.

十四、 附錄 3 依據 MARPOL 附錄 VI 第 27.4、27.5 或 27.6 條規定的旗國/公司轉換前的匯集數據樣本

APPENDIX 3

SAMPLE OF THE AGGREGATED DATA BEFORE A TRANSFER OF FLAG/COMPANY ADDRESSED IN REGULATIONS 27.4, 27.5 OR 27.6 OF MARPOL ANNEX VI

| Date of transfer (dd/mm/yyyy) | Type of transfer (flag/company/both) | Reporting period       |                      | Distance (n.m) Travelled |   | Hours under way (hh:mm) | Fuel consumption (metric tons) |     |                                     |     |                                   |     |  |  |
|-------------------------------|--------------------------------------|------------------------|----------------------|--------------------------|---|-------------------------|--------------------------------|-----|-------------------------------------|-----|-----------------------------------|-----|--|--|
|                               |                                      | Date from (dd/mm/yyyy) | Date to (dd/mm/yyyy) | Total distance travelled | *distance to be deducted from CII calculation |                         | total mass                     |     | *mass to be deducted from the total |     | **mass consumed in STS operations |     |  |  |
|                               |                                      |                        |                      |                          |   |                         | ***DO/GO                       | ... | DO/GO                               | ... | DO/GO                             | ... |  |  |
| 12/05/2023                    | Flag                                 | 01/01/2023             | 11/05/2023           |                          |   |                         |                                |     |                                     |     |                                   |     |  |  |
| 15/06/2023                    | Company                              | 12/05/2023             | 14/06/2023           |                          |   |                         |                                |     |                                     |     |                                   |     |  |  |
| 02/11/2023                    | Both                                 | 15/06/2023             | 01/11/2023           |                          |   |                         |                                |     |                                     |     |                                   |     |  |  |
| .....                         |                                      |                        |                      |                          |   |                         |                                |     |                                     |     |                                   |     |  |  |

\* Refer to the aggregated mass of fuel consumption to calculate  $FC_{voyage}$ ,  $FC_{electrical}$ ,  $FC_{boiler}$  and  $FC_{other}$  in the 2022 *Interim guidelines on correction factors and voyage adjustments for CII calculations (G5)*, (resolution MEPC.355(78)).

\*\* Refer to the aggregated mass of fuel consumption to calculate  $AF_{Tanker,STS}$  in the 2022 *Interim guidelines on correction factors and voyage adjustments for CII calculations (G5)*, (resolution MEPC.355(78)).

\*\*\* Refer to fuel types specified in 2018 *Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as may be amended).

十五、 附錄 3-1 依據 MARPOL 附錄 VI 第 27.4、27.5 或 27.6 條規定的旗國/公司轉換前用於自發性的計算 CII 試驗指標的匯集數據樣本

APPENDIX 3 – ADD.1

SAMPLE OF THE AGGREGATED DATA BEFORE A TRANSFER OF FLAG/COMPANY ADDRESSED IN REGULATIONS 27.4, 27.5 OR 27.6 OF MARPOL ANNEX VI TO CALCULATE TRIAL CII METRICS ON A VOLUNTARY BASIS

The following aggregated data may be additionally included in the table in appendix 3, if one or more trial CII metrics have been applied on a voluntary basis:

| Date of transfer (dd/mm/yyyy) | Type of transfer (flag/company/both) | Reporting period       |                      | Laden distance travelled (n.m) | ****Transport work (metric of transport work) |
|-------------------------------|--------------------------------------|------------------------|----------------------|--------------------------------|---|
|                               |                                      | Date from (dd/mm/yyyy) | Date to (dd/mm/yyyy) |                                |   |
| 12/05/2023                    | Flag                                 | 01/01/2023             | 11/05/2023           |                                |   |
| 15/06/2023                    | Company                              | 12/05/2023             | 14/06/2023           |                                |   |
| 02/11/2023                    | Both                                 | 15/06/2023             | 01/11/2023           |                                |   |
| .....                         |                                      |                        |                      |                                |   |

\*\*\*\* As defined in section 3 of *Guidelines for voluntary use of the ship energy efficiency operational indicator (EEOI)* circulated by MEPC.1/Circ.684.