INTERNATIONAL MARITIME ORGANIZATION

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MARINE ENVIRONMENT PROTECTION COMMITTEE
59th session
Agenda item 4

MEPC 59/4/31
8 May 2009
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# PREVENTION OF AIR POLLUTION FROM SHIPS

## Outcome of BLG 13

## Proposed amendments to resolution MEPC.170(57) – Guidelines for Exhaust Gas Cleaning Systems

**Submitted by Finland**


| SUMMARY | |
|---|---|
| ***Executive summary:*** | This document provides comments and proposals for possible amendments to resolution MEPC.170(57), Guidelines for Exhaust Gas Cleaning Systems |
| ***Strategic direction:*** | 7.3 |
| ***High-level action:*** | 7.3.1 |
| ***Planned output:*** | 7.3.1.1 |
| ***Action to be taken:*** | Paragraph 4 |
| ***Related documents:*** | MEPC 57/21, annex 4; MEPC 58/23/Add.1, MEPC 58/5/8; BLG 13/18 and MEPC 59/10/3 |


1 MEPC 59 is expected to consider the outcome of BLG 13 on the review of relevant non-mandatory instruments as a consequence of the revised MARPOL Annex VI and the $NO_x$ Technical Code 2008, adopted at MEPC 58, which is expected to come into force on 1 July 2010.

2 MEPC 59 is also expected to consider a number of documents submitted to MEPC 58 which could not be duly considered at that session due to time constraints, including MEPC 58/5/8.

3 Finland has considered resolution MEPC.170(57) in light of its implementation and found some issues which should be revisited by MEPC 59. The proposed amendments can be found in the annex.

**Action requested of the Committee**

4 The Committee is invited to consider the proposed amendments to resolution MEPC.170(57) and decide as appropriate.

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**ANNEX**

**THE PROPOSED AMENDMENTS TO RESOLUTION MEPC.170(57)**

| # | Section | Discussion and proposals for amendments |
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| 1 | 1.2 | **EQUIVALENCE BETWEEN FUEL SULPHUR CONTENT AND EXHAUST GAS EMISSION**<br><br>**Discussion:**<br>The accurate equivalent emission ratio $SO_2$(ppm)/$CO_2$(%) corresponding to a fuel sulphur content of 0.1% m/m is 4.3.<br><br>**Proposal:**<br>In table 1 in section 1.3 of the Annex to MEPC 59/10/5, use "4.3" as equivalent value for a fuel sulphur content of 0.1% m/m. |
| 2 | 2.3 | **DEFINITIONS**<br><br>**Discussion:**<br>The term SECA has changed to ECA. The application of EGC systems has also changed and can be used also outside ECAs. However, an ECA can also be a Tier III Emission Control area for $NO_x$ emissions. Therefore we propose that "$SO_x$" should be mentioned in documents related to equipment for $SO_x$ emission reduction.<br><br>**Proposal:**<br>• Change SECA Compliance Plan to *"$SO_x$ Emission Compliance Plan, SECP".*<br>• Change SECA Compliance Certificate to *"$SO_x$ Emission Compliance Certificate, SECC".* |
| 3 | 2.3<br>5.2<br>5.3 | **CERTIFICATION UNDER SCHEME B**<br><br>**Discussion:**<br>As under Scheme A, there are several issues to be approved by the Administration during the certification stage also under Scheme B, including approval of ETM, OMM and Record Book form, approval of all monitoring equipment, water discharge compliance with 10.1.5 and 10.1.6 etc. Essentially such an approval is a unit approval similar to Scheme A, but with somewhat different requirements. Therefore a certification procedure also under Scheme B is appropriate.<br><br>**Proposal:**<br>2.3, second table: Add SCC also under Scheme B<br>5.2, insert new sentence: *"Similar to Scheme A, an EGC unit should be certified for compliance with applicable requirements as a unit approval, serially manufactured units, or production range approval."*<br>5.3, insert new sentences:<br>• *"Each EGC unit meeting relevant requirements should be issued by the Administration with a SCC.*<br>• *Application for a SCC should be made by the EGC system manufacturer, shipowner or other party.* |

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| | | • *Subsequent EGC units of the same design as that certified under 5.2 may be issued with SCC by the Administration without the need for testing."* |
| 4 | 4.4.1 | **VERIFICATION OF EGC UNIT CAPACITY**<br><br>**Discussion:**<br>Related to the last sentence, a methodology is needed to ensure that the EGC unit is fitted to a fuel oil combustion unit for which it is rated. This can be performed by comparing the gas flow capacity of the EGC unit (as documented in the ETM) with a reliable document specifying the gas flow of the combustion unit. This can be a Technical File related to an EIAPP certificate, if available, or another credible document issued by the engine maker or designer.<br><br>**Proposal:**<br>At the end of 4.4.1, insert new sentence: *"A Technical File related to an EIAPP certificate, if available, or an Exhaust Gas Declaration issued by the engine maker or designer or a Flue Gas Declaration issued by the boiler maker or designer serves this purpose".* |
| 5 | 4.4.7 | **pH-MONITORING**<br><br>**Discussion:**<br>Normally EGC units are not equipped with pH monitoring device at scrubber inlet and outlet. A fresh water scrubber may have a sensor at the inlet, to maintain correct pH by injection of an alkaline solution. Sea water scrubbers may have a sensor at the outlet for monitoring and possible control purposes. Installing two sensors is an unnecessary expense and complication. One is typically enough for monitoring the functionality of the EGC unit (in addition to the pH sensor monitoring the discharge water as per section 10.2).<br><br>**Proposal:**<br>Replace the word "and" with *"or"* in the sentence "…pH of wash water at the EGC unit's inlet and outlet connections…" |
| 6 | 4.4.7 | **FREQUENCY OF MONITORING PARAMETERS**<br><br>**Discussion:**<br>For the sake of clarity, the required frequency for mandatory monitoring of parameters could be stated.<br><br>**Proposal:**<br>At the end of the second sentence, add *"...at least with the same frequency as required for continuous monitoring of $SO_2$ and $CO_2$ under 5.4.2."* |
| 7 | 5.4.1<br>6.14<br>6.15 (a) | **CO2 REDUCTION OF EGC UNIT**<br><br>**Discussion:**<br>There may be cases where the $CO_2$ concentration of the exhaust gas is reduced by the EGC unit. In such cases the $SO_2/CO_2$-ratio is not representative, and a correction method is needed, such as measuring $SO_2$ at the EGC unit outlet but $CO_2$ at the inlet. |

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| | | **Proposal:**<br>After 5.4.1 (or possibly after 5.4.3), and after 6.15 (a), insert new sentence: *"In justified cases where the $CO_2$ concentration is reduced by the EGC unit, the $CO_2$ concentration can be measured at the EGC unit inlet, provided that the correctness of such a methodology can be clearly demonstrated."*<br>At the end of 6.14, delete the wording *"...down stream of the EGC."* |
| 8 | 10.1.5.2 | **$NO_x$-MEASUREMENT FOR DETERMINATION OF NITRATE**<br><br>**Discussion:**<br>When demonstrating the discharge rate of nitrates in the discharge water, emission measurement instruments onboard can be used for determination of $NO_x$ emission in the exhaust gas. For measuring of $SO_2$ section 6.3 stipulates NDIR or NDUV analyzers. NDIR analyzers are also suitable for measurement of $NO_x$.<br><br>**Proposal:**<br>At the end of 10.1.5.2, add: "*NDIR analyzers or equivalent can be used to determine $NO_x$ in exhaust gases*". |
| 9 | App.1 | **Proposal:**<br>For clarity, update the diagram cosmetically, see the figure below. |

**$SO_2/CO_2$ ratio vs % sulphur in fuel**