



## **TECHNICAL CIRCULAR No. 598 of 08<sup>th</sup> December 2019**

|                    |   |
|--------------------|---|
| To                 | All Surveyors/Auditors                  |
| Applicable to flag | All Flags                               |
| Title              | <b>SOx Exhaust Gas Cleaning Systems</b> |
| Reference          | CONARINA-Survey Instructions            |

### **SOx Exhaust Gas Cleaning Systems**

This Job Aid provides guidance for Survey of **SOx Exhaust Gas Cleaning Systems (EGCS)**, commonly known as SOx scrubbers, installed as an equivalent means of complying with the fuel sulphur limits of Regulation 14 of MARPOL Annex VI. The process involves verification of compliance with the requirements of Regulation 4 of Annex VI for equivalence and to verify compliance with the applicable IMO Guidelines for SOx EGCS required by Regulation 4 of Annex VI; currently MEPC.259(68). This forms part of the procedure leading to notification by the flag Administration to IMO of acceptance of the SOx EGCS, for a particular vessel, on the basis of being at least as effective, in terms of emissions reductions, as that required by Regulation 14 and acceptance as an 'Equivalent' in accordance with Regulation 4. Completion of the process leads to issue by the Surveyor of the Supplement to the ship International Air Pollution Prevention (IAPP) Certificate providing "Equivalent (regulation 4)" details under section 2.6 of the Supplement.

MARPOL Annex VI Regulation 14 prescribes the sulphur limits of all fuel oil used onboard ships in global waters and Emission Control Areas (ECAs). Regulation 4 to Annex VI allows the use of an alternative method of compliance, such as the use of exhaust after treatment devices, which are proved to be at least as effective in terms of emission reductions as the standards required by Regulation 14. Equivalence for a SOx EGCS is demonstrated by confirming that the ratio of SO<sub>2</sub> (ppm) / CO<sub>2</sub> (% v/v) in the exhaust stream meets the equivalent fuel sulphur limit required by Regulation 4. Regulation 4 also requires an Administration to take into account any relevant guidelines developed by IMO. The regulation also requires that an Administration that approves equipment or systems to Regulation 4 as an 'Equivalent' must notify IMO of that approval for onward communication to the IMO parties. The SO<sub>2</sub> (ppm) / CO<sub>2</sub> (% v/v) ratios applicable to the relevant fuel sulphur limits are tabulated below for reference:

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| Fuel Oil Sulphur Content (%m/m) | Ratio Emission SO <sub>2</sub> (ppm)/CO <sub>2</sub> (%v/v) |
|---------------------------------|---|
| 4.5                             | 195.0   |
| 3.5                             | 151.7   |
| 1.5                             | 65.0  |
| 1.0                             | 43.3  |
| 0.5                             | 21.7  |
| 0.1                             | 4.3   |

The EU Marine Equipment Directive (MED) 96/98/EC, as amended, has identified onboard exhaust gas cleaning systems under A.1/2.10 of Annex A.1 as equipment that requires Type Approval certification in accordance with the MED. Therefore, SOx EGCS fitted to EU flagged vessels are also to be certified to the MED, typically Module G, in addition to the statutory MARPOL certification.

Vessels fitted with SOx EGCS and intending to operate within the 3 nautical mile limit from the United States coast will also need to comply with the U.S. Vessel General Permit (VGP) limits for exhaust gas cleaning wash water discharges.

In accordance with USCG policy letter 12-04 for compliance and enforcement of the emission control areas established within the United States, any requests for equivalency for U.S. flagged ships must be submitted to the USCG Commandant for review. Furthermore, since the U.S. has concerns over IMO Regulation 4 equivalency, any foreign flag ships applying Regulation 4 shall also submit details to USCG Commandant for review/acceptance. It is understood that USCG will inspect and witness any installed EGCS in operation at first port of call to U.S.

#### REFERENCES:

- CONARINA – Instruction, Courtesy of ABS

- ATTACHMENTS: No

kindest Regards,

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