INTERNATIONAL MARITIME ORGANIZATION

E

SUB-COMMITTEE ON SHIP DESIGN AND CONSTRUCTION
8th session
Agenda item 10

SDC 8/10/8
22 October 2021
Original: ENGLISH
Pre-session public release: ☒

UNIFIED INTERPRETATION TO PROVISIONS OF IMO SAFETY, SECURITY, AND ENVIRONMENT-RELATED CONVENTIONS

Proposal to amend section 4.2 of the annex to MSC.1/Circ.1572/Rev.1

Submitted by IACS

SUMMARY

Executive summary:	This document proposes the revisions to MSC.1/1572/Rev.1 in respect of the interpretation of acceptable equivalent arrangements meeting the requirements of SOLAS regulation II-1/26.11, in particular covering those instances where there are differing heating requirements between the service tank and the point of injection
Strategic direction, if applicable:	6
Output:	6.1
Action to be taken:	Paragraph 11
Related documents:	SDC 6/9/4; MSC 101/8/1, MSC 101/WP.10 (paragraphs 34 to 37) and MSC 101/24 (paragraphs 8.9 to 8.11 and 8.17)

Introduction

1 MSC 101, having considered the discussion at SDC 6 on the proposed unified interpretation (UI) of service tank arrangements together with documents MSC 101/8/1 and SDC 6/9/4 (IACS), could not reach consensus on the matter and instructed SDC 7 to further consider the development of a unified interpretation of SOLAS regulation II-1/26.11 and invited interested Member States and international organizations to submit relevant comments and proposals to SDC 7, taking into account the discussions in the Working Group on Fuel Oil Safety (MSC 101/WP.10, paragraphs 34 to 37 and MSC 101/24, paragraph 8.17).

2 Subsequently, SDC 7 was informed by IACS that after having carefully considered the discussions at both SDC 6 and MSC 101, IACS decided to withdraw revision 4 of its UI SC 123, with revision 3 thereof remaining effective after 1 January 2020. IACS was working on the new revision 4 of the UI, aimed at clarifying that fuels with different sulphur contents were not considered as different types of fuels with respect to SOLAS safety requirements, and advised of its intention to submit revision 4 to a future session of the SDC Sub-Committee.

Background

3 During SDC 6 and MSC 101, several concerns were expressed regarding the previous revision 4 of the IACS proposed UI SC 123. In summary these included:

.1 a prescriptive maximum change over time of "one hour" had been introduced;

.2 an operational control as an equivalent was put in place of the due number of tanks required;

.3 the reference to sulphur content of the fuel and Emission Control Area (ECA); while trying to further address the implemented controls inside an ECA of sulphur content of 0.10% m/m, it had overshadowed the emergency requirements for equivalent arrangements in the UI; and

.4 there was no support specifically with respect to the potential equivalent arrangement contained in "Example 1.2" of the proposed UI.

4 Concern was also expressed regarding the potential incompatibility of fuels and the difference between the specific sulphur contents when switching from one fuel grade to another.

Discussion

5 Given the lack of support at MSC 101 for the previous IACS proposed UI and based on the above considerations, IACS has developed a new proposal to take into account the expressed concerns.

6 Briefly, in draft amendments to section 4.2 of circular MSC.1/Circ.1572/Rev.1 fuel grades have been redefined in line with their heating requirements for injection. With regard to the previous proposal in document SDC 6/9/4 with improvement by document MSC 101/8/1, IACS also clarified the following:

.1 references to "sulphur" content and "ECAs" have been removed; this clarifies the matter of operating in or outside an ECA. To emphasise, a specific statement has been added to the interpretation to the effect and in accordance with regulation 3.1 of MARPOL Annex VI that in an emergency situation strict compliance is not mandated; and

.2 the prescriptive maximum requirement of "one hour" time required for changeover has been removed and only reference to "rapid" is made, with due regard to thermal differences.

7 In the understanding of IACS, SOLAS regulation II-1/26.11 does not set out the changeover as "emergency" or specifies the time period within which a transfer should be undertaken. However, in the opinion of IACS, there should be a degree of promptitude for the changeover of the two fuel grades to be completed, given the philosophy of SOLAS. Such a changeover should be prompt, near to immediate, hence the use of the term "rapid", which should also take into account any thermal differences.

8 The heating requirements of the fuels from the service tank to the point of injection have been reviewed and a form of words were adopted such as to avoid the use of terms "HFO" and "MDO" in section 4.2 of MSC.1/Circ.1572/Rev.1. The fuels are now proposed to be referred to as fuels either requiring heating ("Fuel Type 'A'") or not requiring heating ("Fuel

Type 'B'") between the service tank and the point of injection; they are proposed to be termed as "FTA" and "FTB", respectively. This recognizes, for example, that some current MDO/distillates can require further heating after the service tanks.

9 The compatibility between fuels (post-changeover valve) is considered transient at the interface between the two fuels in the pipe after the changeover valve and at the initial stages of transfer and should be manageable by an attentive crew.

10 In example 1.1 of the interpretation, the reference to pilot fuels for the auxiliary boilers has been added, where that is an operating requirement.

Action requested of the Sub-Committee

11 The Sub-Committee is invited to consider the comments provided in paragraphs 5 to 10, the draft revisions to section 4.2 of the annex to MSC.1/1572/Rev.1 provided in the annex and take action, as appropriate.

***

ANNEX

**DRAFT AMENDMENTS TO SECTION 4.2
OF THE ANNEX TO MSC.1/Circ.1572/Rev.1***

"4.2 PARAGRAPH 11

Interpretation

1 Arrangements complying with this regulation and acceptable "equivalent arrangements", for the most commonly utilized fuel systems, are shown below.

2 A service tank is a fuel oil tank which contains only fuel ~~of a quality~~ ready for use~~,~~ (i.e. fuel of a grade and quality that meets the "at engine" specification required by the equipment manufacturer without any treatment~~)~~ other than ~~any necessary~~ pre-heating when necessary ~~in order~~ to achieve the required injection viscosity). A service tank should be declared as such and not be used for any other purpose.

3 Use of a settling tank with or without purifiers, or purifiers alone, and one service tank is not acceptable as an "equivalent arrangement" to two service tanks.

4 Fuel oils intended to meet different sulphur limits should not be considered as different types of fuels with respect to the safety requirement of SOLAS regulation II-1/26.

5 "Equivalent arrangements" are described in the examples below, where grades of fuel may be grouped according to their heating requirement for injection as follows:

.1 Fuel Type "A" (FTA) refers to fuel oils that require heating to achieve required injection viscosity for combustion.

.2 Fuel Type "B" (FTB) refers to fuel oils that do not require heating to achieve injection viscosity.

6 A machinery arrangement based on the normal in-service use of an FTA should have the capability to run on an FTB, however, the converse to this should not necessarily apply.

7 In order to illustrate the possible options, two examples of acceptable arrangements and associated "equivalent arrangements" are provided:

~~**Examples of application for the most common systems**~~

* Tracked changes are indicated using "grey shading" to highlight new insertions and "strikethrough" to highlight deletion of the existing texts.

1 Example 1

1.1 Requirement according to SOLAS – Main and auxiliary engines and boiler(s) operating with ~~heavy fuel oil (HFO)~~ FTA (one fuel ship)

~~HFO~~ FTA Serv. TK 1 Capacity for at least 8 h Main Eng. + Aux. ~~Boiler~~ Eng. + Aux. ~~Eng.~~ Boiler	~~HFO~~ FTA Serv. TK 2 Capacity for at least 8 h Main Eng. + Aux. ~~Boiler~~ Eng. Aux. ~~Eng.~~ Boiler	~~MDO~~ FTB TK For, if so required, pilot fuel for aux. boiler(s) for at least 8 h - may also be used for initial cold starting or repair work of Engines/Boiler(s)

1.2 Equivalent arrangement

~~HFO~~ FTA Serv. TK Capacity for at least 8 h Main Eng. + Aux. ~~Boiler~~ Eng. + Aux. ~~Eng.~~ Boiler	~~MDO~~ FTB Serv. TK Capacity for at least 8 h Main Eng. + Aux. Boiler + Aux. Eng.

~~This interpretation only applies where main and auxiliary engines can operate with heavy fuel oil under all load conditions and, in the case of main engines, during manoeuvring.~~

For pilot burners of auxiliary boilers if provided, an additional ~~MDO~~ FTB tank for ~~8~~ eight hours ~~may~~ would be necessary where an FTB is required for normal operations.

2 Example 2

2.1 Requirement according to SOLAS – Main engine(s) and auxiliary boiler(s) operating with ~~HFO and auxiliary engine operating with marine diesel oil (MDO)~~ either FTA or FTB fuel oils

~~HFO~~ FTA Serv. TK 1 Capacity for at least 8 h Main Eng. + Aux. Boiler	~~HFO~~ FTA Serv. TK 2 Capacity for at least 8 h Main Eng. + Aux. Boiler	~~MDO~~ FTB Serv. TK 1 Capacity for at least 8 h Aux. Eng.	~~MDO~~ FTB Serv. TK 2 Capacity for at least 8 h Aux. Eng.

2.2 Equivalent arrangement

~~HFO~~ FTA Serv. TK Capacity for at least 8 h Main Eng. + Aux. Boiler	~~MDO~~ FTB Serv. TK 1 Capacity for at least the highest of: • 4 h Main Eng. + Aux. Eng. + Aux. Boiler or • 8 h Aux. Eng. + Aux. Boiler	~~MDO~~ FTB Serv. TK 2 Capacity for at least the highest of: • 4 h Main Eng. + Aux. Eng. + Aux. Boiler or • 8 h Aux. Eng. + Aux. Boiler

The arrangements in ~~paragraphs~~ 1.2 and 2.2 apply, provided the propulsion and vital systems which may normally use either of two types of fuel (FTA or FTB) and are capable of ~~support~~ rapid fuel changeover with regard to withstanding thermal differences ~~and are capable of operating in all normal operating conditions at sea with both types of fuel (MDO and HFO)~~."