INTERNATIONAL MARITIME ORGANIZATION

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

SDC 8/10/10
26 November 2021
Original: ENGLISH
Pre-session public release: ☒

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

Comments on document SDC 8/10/8

Submitted by ICS and INTERTANKO

SUMMARY

Executive summary:	This document comments on document SDC 8/10/8 (IACS) concerning a proposed interpretation regarding acceptable equivalent arrangements meeting the requirements of SOLAS regulation II-1/26.11, as provided in MSC.1/Circ.1572/Rev.1
Strategic direction, if applicable:	6
Output:	6.1
Action to be taken:	Paragraph 15
Related documents:	SDC 8/10/8; SDC 6/9/4, SDC 6/13; SDC 7/16 and MSC 101/24

Introduction

1 This document is submitted in accordance with paragraph 6.12.5 of the *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.2) and provides comments on document SDC 8/10/8 (IACS) concerning proposed interpretation regarding acceptable equivalent arrangements meeting the requirements of SOLAS regulation II-1/26.11.

Background

2 Document SDC 6/9/4 provided the latest version of IACS UI SC 123 containing an interpretation of the requirements of SOLAS regulation II-1/26.11. The revision was intended to recognize the use of low sulphur fuels. Following discussions, SDC 6 agreed that the matter required further consideration and forwarded the document to MSC 101 for consideration under the Committee's agenda item on "Development of further measures to enhance the safety of ships relating to the use of fuel oil" (SDC 6/13, paragraph 9.24).

3 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 101/24, paragraph 8.17).

4 Subsequently, SDC 7 noted the statement from 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 and that 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 (SDC 7/16, paragraphs 11.4 and 11.5).

5 Document SDC 8/10/8 contains a new proposal from IACS for draft amendments to MSC.1/Circ.1572/Rev.1 wherein fuel grades have been redefined in line with their heating requirements for injection as:

.1 FTA: Fuels that require heating; and

.2 FTB: Fuels that do not require heating.

Discussion

6 SOLAS regulation II-1/26.11 states:

> "Location and arrangement of vent pipes for fuel oil service, settling and lubrication oil tanks shall be such that in the event of a broken vent pipe this shall not directly lead to the risk of ingress of seawater splashes or rainwater. Two fuel oil service tanks for each type of fuel used on board necessary for propulsion and vital systems or equivalent arrangements shall be provided on each new ship, with a capacity of at least 8 h at maximum continuous rating of the propulsion plant and normal operating load at sea of the generator plant."

7 ICS understands that the intention of SOLAS regulation II-1/26.11 is to ensure that catastrophic water ingress does not occur into fuel oil service, settling and lubrication oil tanks. Furthermore, if a fuel oil service tank is lost due to any reason including water ingress, there must be another fuel service tank available and containing the same type of fuel with sufficient capacity as defined in the regulation. It is clear that the requirement for same type of fuel in both tanks is specified so that, if needed, changeover to the standby fuel oil service tank is quick and easy without the need for a lengthy changeover procedure.

8 The loss of a fuel oil service tank in use can happen anywhere; the ship could be sailing in calm seas or negotiating an area of heavy ship traffic or carrying out critical manoeuvring operations during arrival/departure at port/anchorage. This means that in many, if not most cases, the situation can be deemed as an emergency that warrants quick and decisive action to avoid harm to the ship, crew and the environment.

9 In most conventional fuel oil systems, fuel is transferred from bunker tanks into settling tanks where the fuel is allowed to settle down at a temperature high enough to facilitate separation of water from the fuel which could then be drained off from the bottom of the settling tank. Fuel oil purifiers then process the fuel from the settling tanks to separate the remainder of the water in the fuel along with various other impurities to be discharged as sludge.

The purified fuel oil is transferred into service tanks that are kept ready to ensure interruption free operation of the propulsion and auxiliary plants. In other words (and as described in paragraph 4.2.2 of the annex to MSC.1/Circ.1572/Rev.1), a fuel oil service tank is a fuel oil tank which contains only fuel of a quality ready for use. Loss of the fuel oil service tank in use will lead to rapid loss of fuel feed to the related propulsion and auxiliary machinery which would consequently lead to dangerous loss of power and control.

10 Fuel change-over is a complex process. The timing must be correct in order to facilitate the mixing of fuels with different sulphur content in the system and to ensure compliance with the relevant sulphur regulations at the engine inlet. Even if this aspect is ignored during an emergency, several other technical factors need to be considered. If the fuel injection system experiences drastic temperature differences, the resulting thermal shock may cause irregular fuel pump operation or seizures in the worst cases. Engine manufacturers have guidelines on the temperature gradient that their systems can handle during the fuel changeover, for example 2°C change per minute. The temperature-dependent nature of fuel viscosity also affects the changeover process. The higher the temperature, the lower the fuel viscosity. It is neither practical to reduce FTA temperature too much as the fuel pumps may become overloaded, nor to raise the FTB temperature too much at the risk of gassing in the system. Even if the process is manged by an attentive crew, the changeover between FTA and FTB cannot therefore be "rapid".

11 ICS shares the view that fuel oils intended to meet different sulphur limits cannot always be considered as different types of fuels with respect to the requirement of SOLAS regulation II-1/26. In this regard, the proposed alternative grouping of fuels according to their heating requirement for injection as either FTA or FTB can be supported conditional on the following understanding:

.1 FTA and FTB are different types of fuels with respect to the requirement of SOLAS regulation II-1/26; and

.2 rapid changeover can only occur between fuel oil service tanks having the same type of fuel, i.e. between two fuel tanks both containing FTA or two fuel tanks both containing FTB.

12 Based on the above paragraphs, it is clear that for a single fuel system (one fuel ship as specified in MSC.1/Circ.1572), regardless of whether the single fuel is FTA or FTB, two fuel oil service tanks with sufficient capacity must be provided for the type of fuel in use. ICS therefore considers that the equivalent arrangement suggested in document SDC 8/10/8 as 1.2 for a one-fuel ship does not meet the safety requirement specified by SOLAS regulation II-1/26. As an example, if catastrophic contamination occurs in one of the service tanks in the example 1.2, as suggested in document SDC 8/10/8, the ship will not have a service tank to use for the period of time until the system is safely and gradually changed over from FTA to FTB, which could prove to be disastrous for the ship's safety.

13 ICS supports the outcome from MSC 101, whereby IACS retained revision 3 of IACS UI SC 123 effective from 1 January 2020. ICS notes that section 4 of MSC.1/Circ.1572/Rev.1 does not reflect in entirety the corresponding fuel oil tank arrangements contained in revision 3 of IACS UI SC 123. Specifically, example 1.2 on page 30 of MSC.1/Circ.1572/Rev.1 provides the option for one HFO service tank and one MDO service tank for a one fuel ship operating on HFO, whereas revision 3 of IACD UI SC 123 specifies an arrangement with two HFO service tanks as example 1.2 for the same ship.

14 Based on the alternative grouping of fuels proposed by IACS in paragraph 8 of document SDC 8/10/8 and the arguments provided in paragraphs 7 to 12, ICS proposes the following amendment to example 1.2, as provided in IACS UI SC 123, to be considered for inclusion in section 4 of MSC.1/Circ.1572/Rev.1, for an equivalent arrangement for a ship with main and auxiliary engines and boilers operating with FTA (one fuel ship).

1.2 Equivalent arrangement

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

Action requested of the Sub-Committee

15 The Sub-Committee is invited to consider the above comments and take action as appropriate.