

SUB-COMMITTEE ON CARRIAGE OF
CARGOES AND CONTAINERS
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Agenda item 10

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

**Revision 5 of IACS unified interpretation (UI) SC 89 on SOLAS regulation II-2/19.3.4
and the IMSBC Code cargo space ventilation requirements**

Submitted by IACS

SUMMARY

Executive summary: This document informs the Sub-Committee on revision 5 of IACS UI SC 89 on SOLAS regulation II-2/19.3.4 and the IMSBC Code cargo space ventilation requirements with the inclusion of a new cargo type in accordance with the amendments to the IMSBC Code (resolution MSC.539(107)).

*Strategic direction,
if applicable:* 7

Output: 7.1

Action to be taken: Paragraph 8

Related documents: None

Background

1 IMO resolution MSC.539(107) introduced DIRECT REDUCED IRON (D) (By-product fines with moisture content of at least 2%) (DRI (D)) in the IMSBC Code, appendix 1, "Individual schedules of solid bulk cargoes". Resolution MSC.539(107) will be applicable from 1 January 2025.

2 Revision 4 of IACS unified interpretation SC 89 was issued as MSC.1/Circ.1434.

Discussion

3 For all cargoes where the IMSBC Code requires continuous mechanical ventilation, revision 4 of IACS UI SC 89 provides clarity regarding:

- .1 the inclusion of spaces adjacent to cargo spaces carrying such cargoes and not separated from such cargo spaces by gastight bulkheads or decks, in order to avoid accumulation of explosive and toxic gases; and

- .2 the relationship to the requirements of SOLAS regulation II-2/5.2.1.1 for limiting the fire growth potential by closing ventilation inlets and outlets, i.e. do not prohibit ventilators from being fitted with means of closure.

4 It was noticed that, like the other cargoes listed in revision 4 of IACS UI SC 89, the individual schedule for DRI (D) (By product fines with a moisture content of at least 2%), in appendix 1 of the IMSBC Code, requires that mechanical surface ventilation shall be available at all times, which may cause similar ambiguity regarding spaces to be included and the application of SOLAS regulation II-2/5.2.1.1.

5 To provide the necessary clarity, IACS included DRI (D) (By-product fines with a moisture content of at least 2%) in the list of cargoes. While other cargoes which have been listed in UI SC 89 require "continuous ventilation", DRI (D) (By product fines with moisture content of at least 2%) requires that "ventilation shall be available all times". Therefore, the ventilation requirement for DRI (D) was listed separately from other cargoes.

6 The revision 5 of UI SC 89 is provided in the annex of this document.

7 The Sub-Committee is invited to note that the revision 5 of UI SC 89 will be uniformly implemented by IACS members on or after 1 January 2025, unless provided with written instruction to apply a different interpretation by the Administration on whose behalf they are authorized to act as a recognized organization, for ships flying their flag.

Action requested of the Sub-Committee

8 The Sub-Committee is invited to note the information in this document and IACS UI SC 89 (revision 5) in the annex.

ANNEX

REVISION 5 OF IACS UNIFIED INTERPRETATION SC 89 ON VENTILATION OF CARGO SPACES*

SOLAS regulation II-2/19.3.4

3.4 Ventilation arrangement

3.4.1 Adequate power ventilation shall be provided in enclosed cargo spaces. The arrangement shall be such as to provide for at least six air changes per hour in the cargo space based on an empty cargo space and for removal of vapours from the upper or lower parts of the cargo space, as appropriate.

3.4.2 The fans shall be such as to avoid the possibility of ignition of flammable gas air mixtures. Suitable wire mesh guards shall be fitted over inlet and outlet ventilation openings.

3.4.3 Natural ventilation shall be provided in enclosed cargo spaces intended for the carriage of solid dangerous goods in bulk, where there is no provision for mechanical ventilation.

IMSBC Code, section 1 – General provisions

1.7 Definitions

Ventilation means exchange of air from outside to inside a cargo space.

.1 Continuous ventilation means ventilation that is operating at all times.*

IMSBC Code, section 3 – Safety of personnel and ship

3.5 Ventilation

3.5.4 Ventilation openings shall be provided in holds intended for the carriage of cargoes that require continuous ventilation.* Such openings shall comply with the requirements of the Load Line Convention as amended for openings not fitted with means of closure.

Footnote:

* The IMSBC Code requires continuous ventilation for the following cargoes:

ALUMINIUM FERROSILICON POWDER UN 1395
ALUMINIUM SILICON POWDER, UNCOATED UN 1398
ALUMINIUM SMELTING / REMELTING BY- PRODUCTS, PROCESSED
ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-
PRODUCTS UN 3170
FERROPHOSPHORUS (including BRIQUETTES)
FERROSILICON (25% ≤ Silicon < 30% or ≥ 90% Silicon)
FERROSILICON UN 1408 (30% ≤ Silicon < 90%)
ZINC ASHES UN 1435

* The new text of revision 5 of UI SC 89 is shown as underlined.

IMSBC Code, appendix 1 – Individual schedules of solid bulk cargoes

DIRECT REDUCED IRON (D) (By-product fines with moisture content of at least 2%)

Ventilation

During the voyage, mechanical surface ventilation shall be provided in each cargo hold carrying this cargo, in order to keep the hydrogen concentration less than 1% by volume (25% LEL).

Mechanical surface ventilation shall be available at all times, either by compliance with the Load Line Convention, annex 1, regulation 19(3), or by adopting measures to avoid a situation whereby the cargo hold mechanical ventilation system could not be used owing to rough seas, such measures to be in keeping with good seamanlike practice as for similar cargoes emitting intermittent combustible gases and advice from weather routing service providers.

Interpretation

If adjacent spaces are not separated from cargo spaces by gastight bulkheads or decks then they are considered as part of the enclosed cargo space and the ventilation requirements shall apply to the adjacent space as for the enclosed cargo space itself.

Where the IMSBC Code requires:

- .1 two fans per hold, a common ventilation system with two fans connected is acceptable; and
- .2 continuous ventilation or ventilation at all times, this does not prohibit ventilators from being fitted with a means of closure as required for fire protection purposes under SOLAS II-2/5.2.1.1 provided the minimum height to the ventilator opening is to be in accordance with ICLL/19.3 (4.5 m for Position 1 and 2.3 m for Position 2).