DEUTSCHE FLAGGE

Bundesrepublik Deutschland

BG Verkehr – Dienststelle Schiffssicherheit

Flaggenstaatliche Interpretation

FI S/008/NL/2025/Rev. 00

E

Flag State Interpretations (FI) are published by the Ship Safety Division of BG Verkehr, which is a part of the German Flag State Administration. The content is intended to provide a uniform interpretation of international and national rules and regulations for sea-going vessels under German Flag. Flag State Interpretations are also published as guidance to certain current topics. They are adapted to practical experience and are therefore under continuous development. New Flag State Interpretations as well as revisions of existing ones are prioritized based on market demands regarding rules, regulations and current topics. The period of validity results from the publication date. The German version of the Flag State Interpretation prevails.

Unless otherwise specified below, the definitions of the FI S/-/000/2020 in the version valid at the time of completion of this FI are applicable.
This FI is always to be applied together with the referenced regulations.

Types of ships:	**Cargo Vessel / Passenger Vessel**		
Section:	**Shipbuilding / Machinery**		
Topic category:	**National Loadline**		
Topic:	**Heights of Ventilators to Machinery Spaces or Emergency Generator Rooms**		
Interpreted rule:	**ICLL 66/88, Reg. 17(4) i.c.w. Reg. 17(3), 19(3)** **SOLAS Reg. II-1/35**		
References:	**International Convention on Load Lines (ICLL 66/88)** **International Convention for the Safety of Life at Sea (SOLAS)** **EC Passenger Ship Directive (2009/45/EC)** **Part 1 of Annex 1a of SchSV (Passenger ships)** **Part 7 of Annex 1a of SchSV (Load Line)** **ISO 8861:1998 Shipbuilding — Engine-room ventilation in diesel-engined ships** **UR LL58, M45**		
Date:	**29.12.2025**	**Valid from:**	**29.12.2025**

Introduction

In principle, the Load Line Convention provides that all ships shall have ventilator heights of 4500 mm above deck in position 1 and 2300 mm above deck in position 2 for machinery spaces or emergency generator rooms, because these ventilators must continuously ensure

air supply. The aim is to ensure that the ship remains operable under any weather condition. Therefore, closure of the above-mentioned ventilators is not possible. Reg. 17(4) of the Load Line Convention allows for coamings of such ventilators to be of deviating heights. However, a continuous air supply through other adequate means must be permanently provided in case the lower ventilators have to be closed during adverse weather. The present FI elaborates on common approaches as well as under which conditions the Ship Safety Division (DS) accepts them.

Original text oft he standard

ICLL Regulation 17 – Machinery space openings

[…]

(3) Coamings of any fiddley, funnel or machinery space ventilator in an exposed position on the freeboard deck or superstructure deck shall be as high above the deck as is reasonable and practicable. In general, ventilators necessary to continuously supply the machinery space shall have coamings of sufficient height to comply with regulation 19(3), without having to fit weathertight closing appliances. Ventilators necessary to continuously supply the emergency generator room, if this is considered buoyant in the stability calculation or protecting opening leading below, shall have coamings of sufficient height to comply with regulation 19(3), without having to fit weathertight closing appliances.

(4) Where due to ship size and arrangement this is not practicable, lesser heights for machinery space and emergency generator room ventilator coamings, fitted with weathertight closing appliances in accordance with regulation 19(4), may be permitted by the Administration in combination with other suitable arrangements to ensure an uninterrupted, adequate supply of ventilation to these spaces.

[…]

ICLL Regulation 19 – Ventilators

[…]

(3) Ventilators in position 1 the coamings of which extend to more than 4.5 m above the deck, and in position 2 the coamings of which extend to more than 2.3 m above the deck, need not be fitted with closing arrangements unless specifically required by the Administration.

[…]

SOLAS Regulation II-1/35 – Ventilation systems in machinery spaces

Machinery spaces of category A shall be adequately ventilated so as to ensure that when machinery or boilers therein are operating at full power in all weather conditions including heavy weather, an adequate supply of air is maintained to the spaces for the safety and comfort

of personnel and the operation of the machinery. Any other machinery space shall be adequately ventilated appropriate for the purpose of that machinery space.

Information on the issue at hand

1. According to the International Convention on Load Lines (ICLL 66/88), Annex I, Chap. I, Reg. 17(2), ventilators necessary to continuously supply engine rooms shall have a coaming height as specified in Reg. 19(3). This applies to ventilation inlets as well as to ventilation outlets.

   Reg. 19(3) prescribes a height of 4500 mm above deck in position 1 and 2300 mm above deck in position 2 for ventilators that have no closing appliances in a watertight manner, regardless of the stability and operating conditions of the vessel. However, if ventilators are provided with weathertight closing appliances, lesser coaming heights may be accepted.

   According to Reg. 19(4), lesser coaming heights for ventilators of machinery spaces and emergency generator rooms are permitted only if these ventilators are provided with weathertight closing appliances and, additionally, other suitable arrangements to ensure an adequate uninterrupted supply of air to these rooms. This requires the approval of the Shipbuilding Department.

2. A possible solution to ensure the uninterrupted air supply of the rooms containing combustion engines as mentioned under item 1 above may be a secondary ventilator. In this case, the main ventilators (primarily) of these rooms are provided with weathertight closing appliances and, according to Reg. 19(1), have coamings of at least 900 mm (for position 1) or 760 mm (for position 2), respectivley above the deck. In addition, ventilators (secondary) are present that have the coaming heights above the deck as specified by Reg. 19(3), so that they can remain unclosed. Prerequisite for this arrangement is:

   2.1. The construction of secondary ventilators shall be in accordance with the state oft he art in shipbuilding and designed to withstand the stresses caused by ship operations.

   2.2. The cross-sectional area of the ventilators intake/outlet shall be sufficient to supply combustion and cooling air to the combustion engine rooms so that a safe minimum operation is guaranteed, e.g. for the search of a safe berth or in a position to weather out.

   2.3. The safe minimum operation shall be proven by a volume flow calculation and a sea trial. The volume flow calculation shall be carried out in accordance with DIN EN ISO 8861, as amended, and submitted to the Machinery Department of the DS.

   Ancillary units, such as generators, pumps, boilers, etc., shall be taken into account in the volume flow calculation if they are necessary to maintain the safe minimum operation.

   The sea trial shall be carried out in the presence of a surveyor of the DS or a recognized classification society.

   2.4. The safe minimum operation, which should be used to calculate the alternative air supply, shall be 65 % of the rated speed of the vessel. For craft where the machinery spaces are at least temporarily occupied during operation and that have to be allocated category A (acc. to Reg. II-1/3 SOLAS), it needs to be proven that 100% of the rated speed is achieved.

In order to determine the power of the propulsion machinery necessary for this speed, the propeller curve of the respective vessel shall generally be used. If the curve is not available, it shall be determined on the basis of the actual operational sailing profile.

3. **Cargo ships with a length of 24 m and above** not subject to the International Convention on Load Lines are covered by the national provisions of Part 7 of Annex 1a of the SchSV (ship safety ordinance).

   Passenger ships not subject to the International Convention on Load Lines are covered by the EU Directive 2009/45/EC or Part 1 of Annex 1a of the SchSV. In both the regulations of the EU Directive as well as the regulations of Annex 1a, the provisions of the International Convention on Load Lines that are mentioned under items 1. and 2. of this FI are declared generally applicable. Therefore, the requirements of this FI apply accordingly.

   However in this context, the ventilator heights according to Reg. 8.3.2 of Part 1 of Annex 1a apply to passenger ships.

4. If the above-mentioned ventilator heights cannot be implemented due to the ship's special service profile or special design, it is possible to deviate from these heights in application of Reg. 2(5) of the ICLL 66/88 under the following conditions:

   - the vessel was assigned a freeboard greater than the minimum freeboard (increased freeboard)

   and

   - the vessels sails within adequate service conditions (e. g. restricted operating area, weather and sea states)

5. The decision as to how much the freeboard shall be increased and whether further measures or incidental provisions are necessary is the responsibility of the Shipbuilding Department. This decision is made based on the overall context of the ship's design, purpose and area of operation and is always a case by case decision.

6. If, due to fittings, materials, appliances or installed apparatuses or other arrangements, an equivalent, according to Article 8 of the ICLL 66/88, to the provisions referred to in points 1. and 3. is aimed for, it shall be proven by the applicant to the Shipbuilding Department and Machinery Department. The proof shall:

   either

   6.1. be provided by a practical test, the duration of which shall be previously agreed upon with the Shipbuilding Department and Machinery Department. During the test, all relevant data and observations shall be documented and summarized in a final technical report that shall meet the requirements of the departments,

   or

   6.2. by submitting documentation of a technical solution recognized as equivalent by another flag state administration or by a recognized classification society,

   or

   6.3. by submitting documentation of a corresponding solution that has already been notified to the IMO by another flag state administration.

   The documents or the final technical report should contain at least the following information:

- the main particulars of the vessel
- the rules and provisions with which an equivalent is to be achieved
- a detailed description of the alternative technical solution, in general with corresponding calculations
- technical drawings
- the frame work of the practical test (duration, weather conditions, sea state conditions, air and water temperature, etc.)
- where required, sea trail documentation or measurement protocols
- repair reports of relevant parts
- the results

Once all relevant information has been made available, the competent departments decide on the acceptance of the approach.

Zusätzliche Informationen

To Fehler! Verweisquelle konnte nicht gefunden werden.**)**

In this context, the minimum freeboard is the freeboard that shall at least be complied with in order to meet the specifications of the freeboard calculation, the intact stability calculation, the longitudinal strength calculations and, if applicable, the damage stability calculation. The largest of these freeboard values shall be observed.

Kontakt:
BG Verkehr
Ship Safety Division
Dept. Shipbuilding
phone: +4940 36 137- 244
fax: +4940 36 137-204
Email: schiffbau@bg-verkehr.de
www.deutsche-flagge.de