

RESOLUTION A.515(13)

*Adopted on 17 November 1983
Agenda item 10(b)*

**FUTURE AMENDMENTS TO THE INTERNATIONAL CONVENTION
FOR THE SAFETY OF LIFE AT SEA, 1974**

THE ASSEMBLY,

RECALLING Article 16(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations concerning maritime safety,

NOTING that the Maritime Safety Committee of the Organization at its forty-eighth session adopted with resolution MSC.6(48) the 1983 amendments to the International Convention for the Safety of Life at Sea, 1974 (1974 SOLAS Convention),

NOTING FURTHER that the Maritime Safety Committee at that session agreed on proposed amendments to chapters II-1 and II-2 of that Convention, which could not be included in the 1983 amendments,

CONSIDERING that these proposed amendments constitute important safety provisions and provide at least the same safety standards as the provisions in the 1974 SOLAS Convention including the 1981 and 1983 amendments,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its forty-eighth session,

1. RECOMMENDS Contracting Governments to the 1974 SOLAS Convention:
 - (a) to implement, as an interim measure, the provisions of these proposed amendments, as set out in Annexes 1 and 2, respectively;
 - (b) to accept ships flying the flags of other States, constructed and equipped in accordance with the 1974 SOLAS Convention and with these proposed amendments, as complying in all respects with the provisions of that Convention, as amended.

ANNEX 1

PROPOSED AMENDMENTS TO CHAPTER II-1 OF THE 1983 SOLAS AMENDMENTS

Regulation 11 – Collision bulkheads in cargo ships

Amend the heading to read:

“Peak and machinery space bulkheads and stern tubes in cargo ships”

Add the following paragraphs:

“8 Bulkheads shall be fitted separating the machinery space from cargo and passenger spaces forward and aft and made watertight up to the freeboard deck.

9 Stern tubes shall be enclosed in a watertight space (or spaces) of moderate volume. Other measures to minimize the danger of water penetrating into the ship in case of damage to stern tube arrangements may be taken at the discretion of the Administration.”

Regulation 21 – Bilge pumping arrangements

Add a new paragraph 1.6 as follows:

“1.6 Provisions shall be made for the drainage of enclosed cargo spaces situated on the bulkhead deck of a passenger ship and on the freeboard deck of a cargo ship, provided that the Administration may permit the means of drainage to be dispensed with in any particular compartment of any ship or class of ship if it is satisfied that by reason of size or internal subdivision of those spaces the safety of the ship is not thereby impaired.

1.6.1 Where the freeboard to the bulkhead deck or the freeboard deck respectively is such that the deck edge is immersed when the ship heels more than 5°, the drainage shall be by means of a sufficient number of scuppers of suitable size discharging directly overboard, fitted in accordance with the requirements of regulation 17 in the case of a passenger ship and the requirements for scuppers, inlets and discharges of the International Convention on Load Lines in force in the case of a cargo ship.

1.6.2 Where the freeboard is such that the edge of the bulkhead deck or the edge of the freeboard deck, respectively, is immersed when the ship heels 5° or less, the drainage of the enclosed cargo spaces on the bulkhead deck or on the freeboard deck, respectively, shall be led to a suitable space, or spaces, of adequate capacity, having a high water level alarm and provided with suitable arrangements for discharge overboard. In addition it shall be ensured that:

- .1 the number, size and disposition of the scuppers are such as to prevent unreasonable accumulation of loose water;
- .2 the pumping arrangements required by this regulation for passenger ships or cargo ships, as applicable, take account of the requirements for any fixed pressure water-spraying fire-extinguishing system;
- .3 water contaminated with petrol or other dangerous substances is not drained to machinery spaces or other spaces where sources of ignition may be present; and
- .4 where the enclosed cargo space is protected by a carbon dioxide fire-extinguishing system the deck scuppers are fitted with means to prevent the escape of the smothering gas.”

Amend the definition of “D” in paragraph 2.9 to read:

“D is the moulded depth of the ship to the bulkhead deck (metres) provided that, in a ship having an enclosed cargo space on the bulkhead deck which is internally drained in accordance with the requirements of paragraph 1.6.2 and which extends for the full length of the ship, D shall be measured to the next deck above the bulkhead deck. Where the enclosed cargo spaces cover a lesser length, D shall be taken as the moulded depth to the bulkhead deck plus lh/L where l and h are the aggregate length and height respectively of the enclosed cargo spaces (metres).”

Include a new regulation 23-1 to read:

“Regulation 23-1 – *Damage control in dry cargo ships*

1 There shall be permanently exhibited, for the guidance of the officer in charge of the ship, a plan showing clearly for each deck and hold the boundaries of the watertight compartments, the openings therein with the means of closure and position of any controls thereof, and the arrangements for the correction of any list due to flooding. In addition, booklets containing the aforementioned information shall be made available to the officers of the ship.

2 Indicators shall be provided for all sliding doors and for hinged doors in watertight bulkheads. Indication showing whether the doors are open or closed shall be given in the vicinity of the aforementioned plan. In addition, shell doors and other openings which, in the opinion of the Administration, could lead to major flooding if left open or not properly secured, shall be provided with such indicators.

3.1 General precautions shall consist of a listing of equipment, conditions and operational procedures, considered by the Administration to be necessary to maintain watertight integrity under normal ship operations.

3.2 Specific precautions shall consist of a listing of elements (i.e. closures, security of cargo, sounding of alarms, etc.) considered by the Administration to be vital to the survival of the ship and its crew."

Regulation 42 – Emergency source of electrical power in passenger ships

Replace sub-paragraph 2.2 with:

"For a period of 36 hours:

- .1 the navigation lights and other lights required by the International Regulations for Preventing Collisions at Sea in force;*
- .2 the main transmitter and main receiver of the radiotelegraph installation specified in regulation IV/10(a) (ii)."

Regulation 43 – Emergency source of power in cargo ships

Replace paragraph 2.3 with:

"For a period of 18 hours:

- .1 the navigation lights and other lights required by the International Regulations for Preventing Collisions at Sea in force;*
- .2 the main transmitter and main receiver of the radiotelegraph installation specified in regulation IV/10(a) (ii).
- .3 the transmitter and receiver of radiotelephone installations specified in regulation IV/16(a)."

ANNEX 2

PROPOSED AMENDMENTS TO CHAPTER II-2 OF THE 1983 SOLAS AMENDMENTS

Include a new regulation to read:

"Regulation 13-1 – Sample extraction smoke detection systems

1 General requirements

1.1 Wherever in the text of this regulation the word "system" appears, it shall mean "sample extraction smoke detection system".

* This sub-paragraph is identical to the corresponding sub-paragraph in the 1981 SOLAS Amendments.

- 1.2 Any required system shall be capable of continuous operation at all times except that systems operating on a sequential scanning principle may be accepted, provided that the interval between scanning the same position twice gives an overall response time to the satisfaction of the Administration.
- 1.3 Power supplies necessary for the operation of the system shall be monitored for loss of power. Occurrence of loss of power shall initiate a visual and audible signal at the control panel and the navigating bridge which shall be distinct from a signal indicating smoke detection.
- 1.4 An alternative power supply for the electrical equipment used in the operation of the system shall be provided.
- 1.5 The control panel shall be located on the navigating bridge or in the main fire control station.
- 1.6 The detection of smoke or other products of combustion shall initiate a visual and audible signal at the control panel and the navigating bridge.
- 1.7 Clear information shall be displayed on or adjacent to the control panel designating the spaces covered.
- 1.8 The sampling pipe arrangements shall be such that the location of the fire can be readily identified.
- 1.9 Suitable instructions and component spares shall be provided for the testing and maintenance of the system.
- 1.10 The functioning of the system shall be periodically tested to the satisfaction of the Administration. The system shall be of a type that can be tested for correct operation and restored to normal surveillance without the renewal of any component.
- 1.11 The system shall be so designed, constructed and installed as to prevent the leakage of any toxic or flammable substances or fire-extinguishing media into any accommodation and service space, control station or machinery space.

2 *Installation requirements*

- 2.1 At least one smoke accumulator shall be located in every enclosed space for which smoke detection is required. However, where a space is designed to carry oil or refrigerated cargo alternatively with cargoes for which a smoke sampling system is required, means may be provided to isolate the smoke accumulators in such compartments for the system. Such means shall be to the satisfaction of the Administration.
- 2.2 Smoke accumulators shall be located for optimum performance and shall be spaced so that no part of the overhead deck area is more than 12 m measured horizontally from an accumulator. Where systems are used in spaces which may be mechanically ventilated, the position of the smoke accumulators shall be considered having regard to the effects of ventilation.
- 2.3 Smoke accumulators shall be positioned where impact or physical damage is unlikely to occur.
- 2.4 Not more than four accumulators shall be connected to each sampling point.
- 2.5 Smoke accumulators from more than one enclosed space shall not be connected to the same sampling point.

2.6 Sampling pipes shall be self-draining and suitably protected from impact or damage from cargo working.

3 *Design requirements*

3.1 The system and equipment shall be suitably designed to withstand supply voltage variations and transients, ambient temperature changes, vibration, humidity, shock, impact and corrosion normally encountered in ships and to avoid the possibility of ignition of flammable gas air mixture.

3.2 The sensing unit shall be certified to operate before the smoke density within the sensing chamber exceeds 6.65% obscuration per metre.

3.3 Duplicate sample extraction fans shall be provided. The fans shall be of sufficient capacity to operate with the normal conditions of ventilation in the protected area and shall give an overall response time to the satisfaction of the Administration.

3.4 The control panel shall permit observation of smoke in the individual sampling pipe.

3.5 Means shall be provided to monitor the airflow through the sampling pipes and to ensure that as far as practicable equal quantities are extracted from each interconnected accumulator.

3.6 Sampling pipes shall be a minimum of 12 mm internal diameter except when used in conjunction with fixed gas fire-extinguishing systems when the minimum size of pipe should be sufficient to permit the fire-extinguishing gas to be discharged within the appropriate time.

3.7 Sampling pipes shall be provided with an arrangement for periodically purging with compressed air."

Regulation 15 – Arrangements for oil fuel, lubricating oil and other flammable oils

Replace paragraph 2.6 by:

“.6 Safe and efficient means of ascertaining the amount of oil fuel contained in any oil fuel tank shall be provided.

.6.1 Where sounding pipes are used they shall not terminate in any space where the risk of ignition of spillage from the sounding pipe might arise. In particular, they shall not terminate in passenger or crew spaces. As a general rule they shall not terminate in machinery spaces. However, where the Administration considers that these latter requirements are impracticable, it may permit termination of sounding pipes in machinery spaces on condition that all the following requirements are met:

.6.1.1 in addition, an oil level gauge is provided meeting the requirements of paragraph .6.2;

.6.1.2 the sounding pipes terminate in locations remote from ignition hazards unless precautions are taken such as the fitting of effective screens to prevent the oil fuel in the case of spillage through the terminations of the sounding pipes from coming into contact with a source of ignition;

.6.1.3 the termination of sounding pipes are fitted with self-closing blanking devices and with a small-diameter self-closing control cock located below the blanking device for the purposes of ascertaining before the blanking device is opened that oil fuel is not present. Provision must be made so as to ensure that any spillage of oil fuel through the control cock involves no ignition hazard.

- .6.2 Other oil level gauges may be used in place of sounding pipes. Such means, like the means provided in paragraph .6.1.1, are subject to the following conditions:
- .6.2.1 in passenger ships, such means shall not require penetration below the top of the tank and their failure or overfilling of the tanks will not permit release of fuel;
- .6.2.2 in cargo ships, the failure of such means or overfilling of the tank shall not permit release of fuel. The use of cylindrical gauge glasses is prohibited. The Administration may permit the use of oil-level gauges with flat glasses and self-closing valves between the gauges and fuel tanks.

Such other means shall be acceptable to the Administration and shall be maintained in the proper condition to ensure their continued accurate functioning in service."

Replace paragraph 3 by the following:

"The arrangements for the storage, distribution and utilization of oil used in pressure lubrication systems shall be such as to ensure the safety of the ship and persons on board. The arrangements made in machinery spaces of category A and whenever practicable in other machinery spaces shall at least comply with the provisions of paragraphs 2.1, 2.4, 2.5, 2.6, 2.7 and 2.8, except that:

- .1 this does not preclude the use of sight-flow glasses in lubricating systems provided that they are shown by test to have a suitable degree of fire resistance;
- .2 sounding pipes may be authorized in machinery spaces; the requirements of paragraphs 2.6.1.1 and 2.6.1.3 need not be applied on condition that the sounding pipes are fitted with appropriate means of closure."

Regulation 38 – Protection of cargo spaces, other than special category spaces, intended for the carriage of motor vehicles with fuel in their tanks for their own propulsion

Replace paragraph 1 by the following:

"1 Fixed fire detection

There shall be provided a fixed fire detection and fire alarm system complying with the requirements of regulation 13 or a sample extraction smoke detection system complying with the requirements of regulation 13-1. The design and arrangements of this system shall be considered in conjunction with the ventilation requirements referred to in paragraph 3."

Regulation 40 – Fire patrols, detection, alarms and public address systems

Replace paragraph 2 by the following:

"2 A fixed fire detection and fire alarm system complying with the requirements of regulation 13 or a sample extraction smoke detection system complying with the requirements of regulation 13-1 shall be provided in any cargo space which, in the opinion of the Administration, is not accessible, except where it is shown to the satisfaction of the Administration that the ship is engaged on voyages of such short duration that it would be unreasonable to apply this requirement."

Regulation 53 – Fire protection arrangements in cargo spaces

Replace sub-paragraph 2.1 by the following:

"2.1 There shall be provided a fixed fire detection and fire alarm system complying with the requirements of regulation 13. The fixed fire detection system shall be capable of rapidly detecting the onset of fire. The type of detectors and their spacing and location shall

be to the satisfaction of the Administration taking into account the effects of ventilation and other relevant factors. After being installed the system shall be tested under normal ventilation conditions and shall give an overall response time to the satisfaction of the Administration."

Replace paragraph 3 by the following:

"3 Cargo spaces, other than ro/ro cargo spaces, intended for the carriage of motor vehicles with fuel in their tanks for their own propulsion

Cargo spaces, other than ro/ro spaces intended for the carriage of motor vehicles with fuel in their tanks for their own propulsion, shall comply with the requirements of paragraph 2 except that in lieu of the requirements of paragraph 2.1 a sample extraction smoke detection system complying with the requirements of regulation 13-1 may be permitted and paragraph 2.2.4 need not be complied with."

Regulation 54 – Special requirements for ships carrying dangerous goods

Replace sub-paragraph 2.3 by the following:

"2.3 Ro/ro cargo spaces shall be fitted with a fixed fire detection and fire alarm system complying with the requirements of regulation 13. All other types of cargo spaces shall be fitted with either a fixed fire detection and fire alarm system complying with the requirements of regulation 13 or a sample extraction smoke detection system complying with the requirements of regulation 13-1. If a sample extraction smoke detection system is fitted, particular attention shall be made to regulation 13-1.1.11 in order to prevent the leakage of toxic fumes into occupied areas."