Subject :

Safe Access To Tanker Bow And Tank Venting System Required For Existing Tankers Under Amendments To SOLAS 74

NKTECHNICAL INFORMATION

No. : 251

Date : 6 April 1998

To: Shipowners and Shipbuilders concerned

Amendments to SOLAS 74 for safe access to tanker bow and tank venting system will become effective on 1 July 1998, the contents of which are as follows:

1) Safe access to tanker bow/ Chapt.II-1, Reg.3-3

Tankers should be provided with the means to enable the crew to gain safe access to the bow even in severe weather condition.

2) Tank venting system/ Chapt.II-2, Reg.59

When the tank venting system is in failure, a secondary means for preventing over/under pressure in the cargo tank should be provided. Alternatively, pressure sensors may be fitted in each cargo tank.

These amendments should apply to existing tankers (constructed before 1 July 1998) as well as to new tankers (constructed on or after 1 July 1998). For the existing ships, the compliance should be made by the date of the first scheduled dry-docking after 1 July 1998, but not later than 1 July 2001.

For all existing tankers which the amendments should apply to, we are going to carry out plan review in order to check the compliance with the amendments before on-board survey. In this regard, we request you to prepare the related drawings and send them to us for approval. Following the plan approval within the Head Office, on-board survey will be carried out to verify the ship's condition according to the approved plan.

For detail on application and requirements of the amendments and on procedures of submitting the drawings, please see the attachments. Should you have any questions, please feel free to contact the tanker section of hull department (Tel: 03 5226 2017, Fax: 03 5226 2019).

Attachments:
A: Safe access to tanker bow for existing tanker
A-1: Guidance on gangway and walkway
B: Tank venting system for existing tanker
B-1: Example of tank venting system
C: Application form

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Attachment A: Safe access to tanker bow for existing tanker

1. Application

These amendments should apply to tankers (including chemical tankers and gas carriers) of 500 tons gross tonnage or over engaged on international voyages, and constructed or adapted for the carriage in bulk of liquid cargoes of a flammable nature.

2. Regulation and guidance of the amendments

Regulation	Guidance
Every tanker should be provided with the means, such as a gangway or walkway, to enable the crew to gain safe access to the bow even in severe weather conditions.	1. Access means to be provided between poop and bow or, in case of a flush deck vessel between crew accommodation and bow. 2. If a gangway or walkway has already been provided in accordance with the regulations applicable at the newbuilding, it may be used as it is, except that both the openings to and from the deck and the shelters should be additionally provided. In this context, the said gangway or walkway does not include access means which consists of a wire rope lifeline or a single handrails. 3. Guidance on construction of a gangway or walkway is as per the attachment A-1, paying attention to the following: 1) Wire ropes may only be accepted in lie of guard rails in special circumstances and then only in limited lengths. 2) Lengths of chain may only be accepted in lie of guard rails if fitted between two fixed stanchions. 3) Where stanchions are fitted, every 3rd stanchion is to be supported by a bracket or stay. 4) Removable or hinged stanchions should be capable of being locked in the uprigth position.
(to be continued)	5) A means of passage over obstructions, if any,

	such as pipes or other fittings of a permanent nature, should be provided. 6) Generally, the width of the gangway or deck-level walkway should not exceed 1.5m.

3. Submission of drawings

Each three copies of the following:

i) General arrangement of gangway or walkway,

ii) Detail of gangway or walkway

iii) Detail of shelter

should be submitted, accompanied with the application (Attachment C), to:

Nippon Kaiji Kyokai

Tanker Section of Hull Department

4-7, Kioi-cho, Chiyoda-ku, Tokyo

Tel: 03 5226 2017, Fax: 03 5226 2019

Attachment A-1: Guidance on gangway and walkway

Present situation	Assigned Summer Freeboard	Position of gangway or walkway		Construction of gangway or walkway (See note 2))
		Height	Position in ship's breadth	
No gangway or walkway provided	≤ (Af+Hs) (See note 1))	At or above the level of the superstructure deck	As near as practicable to the center line of the ship	1
		On the freeboard deck or on the trunk deck	As near as practicable to the center line of the ship	2
			On each side of the hatchways as near to the center line as practicable, in case of ships having cargo hatch like combination carriers	2
	> (Af+Hs) (See note 1))	At or above the level of the superstructure deck	As near as practicable to the center line of the ship	1
		On the freeboard deck or on the trunk deck	As near as practicable to the center line of the ship	2
			On each side of the ship	2
Existing gangway or walkway provided	-	-		3

Note 1): Af: the minimum summer freeboard calculated as type A ship regardless of the type freeboard actually assigned.
Hs: the standard height of superstructure as defined in ILLC Reg.33

Note 2): Detail of construction of gangway or walkway

1.(gangway)	a) provided a continuous platform at least 1.0m in width, constructed of fire resistant and non-slip material. If the Lf of the ship is 100m or less, minimum width may be reduced to 0.6m. It might be required to make the cargo vent outlet higher, when the vent outlet is situated within 4m of newly provided gangway. b) fitted with a foot stop on each side and guard rails extending on each side throughout its length; guard rails should be at least 1.0m high with courses; the clearance below the lowest course is not to exceed 230mm and the clearance between other courses is not to exceed 380mm, and supported by stanchions spaced not more than 1.5m. c) having openings, with ladders where appropriate, to and from the deck. Openings should not be more than 40m apart. d) having shelters of substantial construction set in way of the gangway at intervals not exceeding 45m if the length of the exposed deck to be traversed exceeds 70m. Every such shelter should be capable of accommodating at least one person (its size is about 1x1x2m as standard, but the width of entrance should be at least 0.6m (or over) and be constructed as to afford weather protection on the upward, forward, port and starboard sides (its strength should be equivalent to deckhouse construction).
2.(walkway)	Walkway having the same specifications as stated 1 above, except for foot-stops and platform construction. In case of ships having cargo hatch like combination carriers, the hatchway coaming with a combined height of hatch coaming and fitted hatch cover of together not less than 1m in height may be regarded as forming one side of the walkway, provided that between the hatchways two rows of guard rails are fitted.
3.	In addition to the existing gangway or walkway, openings to and from the deck in 1.c) above and shelters in 1.d) above should be provided.

Attachment B: Tank venting system for existing tanker

1. Application

These amendments should apply to tankers (including chemical tankers) of 500 tons gross tonnage or over engaged on international voyages and carrying crude oil and petroleum products having a flashpoint not exceeding 60°C and a Raid vapor pressure which is below atmospheric pressure and other liquid products having a similar fire hazard.

However, chemical tankers complying with IBC/BCH codes and exclusively carrying products listed in Chapter 17 of IBC code/Chapter VI of BCH code need not apply to these amendments.

2. Regulation and guidance of the amendments

Regulation	Guidance
1. In case where the venting arrangements for the passage of large volumes of vapor, air or inert gas mixtures during cargo loading and ballasting, or during discharging are in failure, the arrangements prescribed in (a) or (b) below should be provided to prevent over-pressure or under-pressure in the cargo tanks.	1. Mal-function or mis-operation of venting pipe as well as a shut-off valve to isolate each cargo tank from a common line need not to be considered. The shut-off valve to isolate each cargo tank from a common line should be provided with locking device and clear visual indication of operational status of the valve.
(a) Means of allowing full flow relief of vapor, air or inert gas mixtures during cargo loading and ballasting or during discharging. (to be continued)	1.Following means may be accepted: 1) Additional arrangement allowing the passage of large volumes of vapor, air or inert gas mixtures during cargo loading and ballasting, or during discharging, 2) Rupture disk*, or 3) PV breaker *: To be of type approved by this Society. 2. For example, acceptable venting systems are shown in the Attachment B-1. Other proposed arrangements will be reviewed on a case by case basis.

(b) Pressure monitoring system for the cargo tanks complying with the following 1) to 3): 1) To be of type approved by this Society 2) Pressure sensors should be fitted in each tank. 3) Monitoring equipment complying with the following i) and ii) should be provided in the ship's cargo control room or the position from which cargo operations are normally carried out: i) Pressure indicator for each cargo tank ii) Visual and audible alarm to be activated by detection over-pressure or under-pressure conditions within a tank.	1. Alarm-setting pressure for over-pressure condition should not in principle be over the test pressure of the cargo tank. 2. Alarm-setting pressure for under-pressure condition should not in principle be under -0.007Mpa. 3. No shut-off valves or closing devices should in principle be fitted between the cargo tank and the pressure sensor. If a shut-off valve has to be fitted, the valve should be provided with locking device and clear visual indicator. 4. Pressure sensor should be so arranged and constructed as to avoid clinging of cargo and should be of easy calibration and maintenance. 5. When change of alarm-setting pressure is needed depending on cargo or loading, procedures on the change should be prescribed in the operating manual of the system.
2. If cargo loading and ballasting or discharging of a cargo tank or cargo tank group is intended, which is isolated from a common venting system, that cargo tank or cargo tank group should be fitted with an arrangement for over-pressure or under-pressure protection as required in 1 above.	

3. Submission of drawings

Each three copies of the following:

i) Piping diagram of cargo vent line (with materials, sizes, kinds, design pressures, etc. of pipes, valves, etc.)

ii) in case of providing pressure monitoring system,

a) General arrangement of the system

b) Detail of the system

c) Operation Manual of the system

should be submitted, accompanied with application (Attachment C), to:

Nippon Kaiji Kyokai

Tanker Section of Hull Department

4-7, Kioi-cho, Chiyoda-ku, Tokyo

Tel: 03 5226 2017, Fax: 03 5226 2019

Attachment B-1: Example of tank venting system

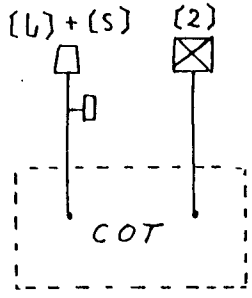
1. Symbol in the schematic diagram shows an arrangement as follows:

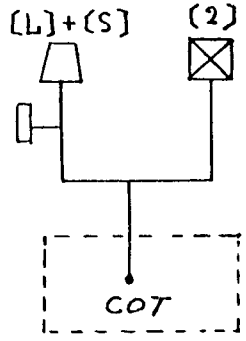
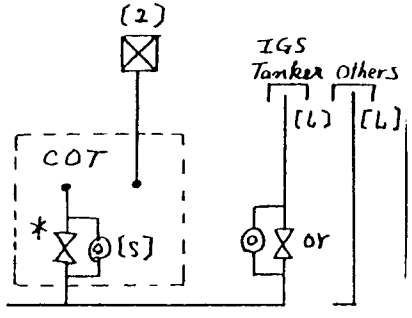
[S] : Arrangement for the flow of small volumes of vapor, air or inert gas mixtures caused by thermal variation in a cargo tank (set out in SOLAS II－2／Reg.59.1.2.1)

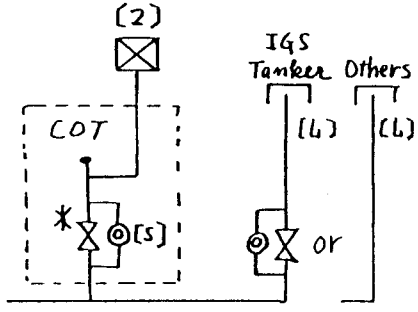
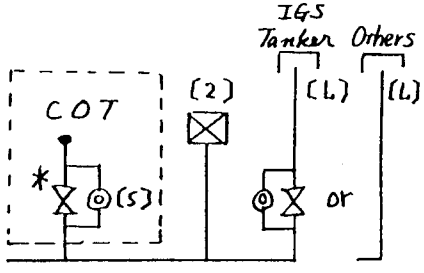
[L] : Arrangement for the passage of large volumes of vapor, air or inert gas mixtures during cargo loading and ballasting, or during discharging (set out in SOLAS II－2／Reg.59.1.2.2)

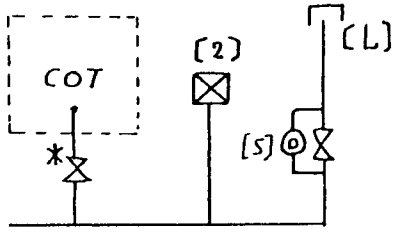
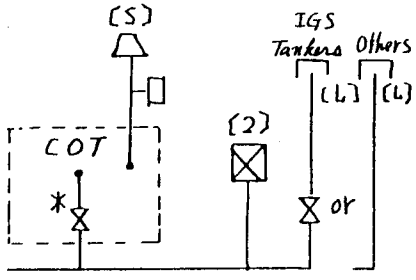
[2] : Additional arrangement to prevent over-pressure or under-pressure in the cargo tanks, when the arrangement [L] above is in failure (required by this-time amendments)

2. In the schematic diagram the arrangement "[L] + [S]" means an arrangement with function of both [L] and [S].

Schematic Diagram		Remarks
 Fig.1	- Independent type of [L] - Independent type of [2]	

Schematic Diagram		Remarks
 Fig.2	- Independent type of [L] - Independent type of [2]	- Existing pipe may be used as part of [2].
 Fig.3	- Common type of [L] - Independent type of [2]	- Where a shut-off valve (marked with *) needs to be closed due to cargo segregation during cargo loading and ballasting, or during discharging, another independent type of [L] should be fitted for the cargo tank. - A shut-off valve (marked with *) should be provided with locking device and clear visual indication of operational status of the valve.

Schematic Diagram		Remarks
 Fig.4	- Common type of [L] - Independent type of [2]	- Existing pipe may be used as part of [2]. - Where a shut-off valve (marked with *) needs to be closed due to cargo segregation during cargo loading and ballasting, or during discharging, another independent type of [L] should be fitted for the cargo tank. - A shut-off valve (marked with *) should be provided with locking device and clear visual indication of operational status of the valve.
 Fig.5	- Common type of [L] - Common type of [2]	- [2] may be P/V breaker fitted in IG line. - A shut-off valve (marked with *) should be provided with locking device and clear visual indication of operational status of the valve.

Schematic Diagram		Remarks
 Fig.6	- Common type of [L] - Common type of [2]	- This case is an example for existing tankers under 81 Amendments of SOLAS 74; constructed before 1 September 1984. - [2] may be P/V breaker fitted in IG line. - A shut-off valve (marked with *) should be provided with locking device and clear visual indication of operational status of the valve.
 Fig.7		- [2] may be P/V breaker fitted in IG line. - A shut-off valve (marked with *) should be provided with locking device and clear visual indication of operational status of the valve.

Attachment C: Application

Application for plan review

Date:

Nippon Kaiji Kyokai

Applicant:
(address)

Contact person:
(with signature)
(Tel) (Fax)

We hereby request plan review on Safe Access to Tanker Bow*/ Tank Venting System* for compliance with SOLAS 74 Amendments to be effective on 1 July 1998 for the below-mentioned existing tanker;

Name of ship/ Class No.	
Gross Tonnage	
Flag state	
Date of keel laid	
Type of ship	
Drawings submitted	

*: Delete as appropriate