


NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 8-89

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Subject: Recommendations Concerning Emergency Towing of Tankers

1. **PURPOSE.** The purpose of this Circular is to call attention to and endorse IMO Resolution A.535(13), "Recommendation on Emergency Towing Requirements for Tankers," which was adopted by the full assembly of the International Maritime Organization on 17 November 1983.
2. **BACKGROUND.**
 - a. Resolution A.535(13) provides recommendations on emergency towing equipment for tank ships. The resolution is included as enclosure (1) of this Circular.
 - b. A recent series of casualties involving tank ships has brought renewed interest to contingencies for emergency evolutions. Emergency towing can be facilitated by implementation of the recommendations of Resolution A.535(13) on the positioning and strength of emergency towing equipment. Efficient emergency towing may aid in the prevention or mitigation of serious tank ship casualties.
3. **DISCUSSION.**
 - a. The Coast Guard endorses the recommendations of Resolution A.535(13). Implementation of these recommendations on all tankships should improve overall operating safety.
 - b. Tank ships outfitted for operation with a single point mooring system may already comply with most of the provisions of Resolution A.535(13).
4. **IMPLEMENTATION.**
 - a. Officers in Charge, Marine Inspection are urged to bring enclosure (1) to the attention of appropriate individuals in the marine industry in their zones.
 - b. Owners and operators of tank ships are encouraged to consider the recommendations of enclosure (1) in order to enhance safety by being better prepared for emergencies.


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INTERNATIONAL MARITIME
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ASSEMBLY - 13th session
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RESOLUTION A.535(13)
adopted on 17 November 1983

RECOMMENDATION ON EMERGENCY TOWING
REQUIREMENTS FOR TANKERS

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 ships carrying oil, liquefied gases or other hazardous liquids in bulk (referred to hereinafter as tankers), in emergencies such as complete mechanical breakdowns, may need to be towed out of danger,

RECOGNIZING that some existing tankers are equipped with special fittings for use at single-point moorings which may be suitable for emergency towing,

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

1. ADOPTS the Recommendation on Emergency Towing Requirements for Tankers, the text of which is set out in the Annex to this resolution;
2. RECOMMENDS that all Governments concerned take appropriate steps to give effect to the Recommendation as soon as possible;
3. REQUESTS the Maritime Safety Committee to keep the Recommendation under review, in particular in respect to new towing concepts which may be introduced and to report as necessary to the Assembly.

ANNEX

RECOMMENDATION ON EMERGENCY TOWING
REQUIREMENTS FOR TANKERS1 Purpose

The purpose of this Recommendation is to facilitate salvage and emergency towing operations on new and existing tankers primarily to reduce the risk of pollution. The Recommendation recognizes the need for harmonization of components in the towing system and uses as a reference the system shown in figure 1. The major components of the system are the tug or towing vessel; the towline; the pennant; the chafing chain; the fairlead and the towing gear connection or strongpoint on the vessel to be towed. The system should facilitate ease of connection and should be capable of being connected and released on board the towed vessel in the absence of main power. The system should be standardized at the point of connection of the towline to the chafing chain.

2 Requirements

2.1 Application

All tankers greater than 50,000 tones deadweight built after adoption of this resolution should be fitted with emergency towing arrangements at the bow and stern. All tankers greater than 100,000 tones deadweight built before adoption, should be fitted with emergency towing positions at the bow and stern at the first scheduled drydocking following adoption but not later than five years after adoption. Each towing position should be fitted with a strongpoint, chafing chain and fairlead.

2.2 Strength of towing system components

Towing system components (strongpoint, chafing chain, fairlead and supporting structure) should have a working strength of at least 2000 kN (working strength is defined as one half ultimate strength). The strength should be sufficient for all angles of towline up to 90° from the ship's centerline.

2.3 Location of strongpoint and fairlead

The bow and stern strongpoint and fairleads should be located so as to facilitate towing from either side of the bow or stern and minimize the stress on the towing system. The axis of the towing gear should, as far as practicable, be parallel to and not more than 1.5 m from either side of the centerline. The distance between the strongpoint and the fairlead should be not less than 2.7 m and not more than 5 m.

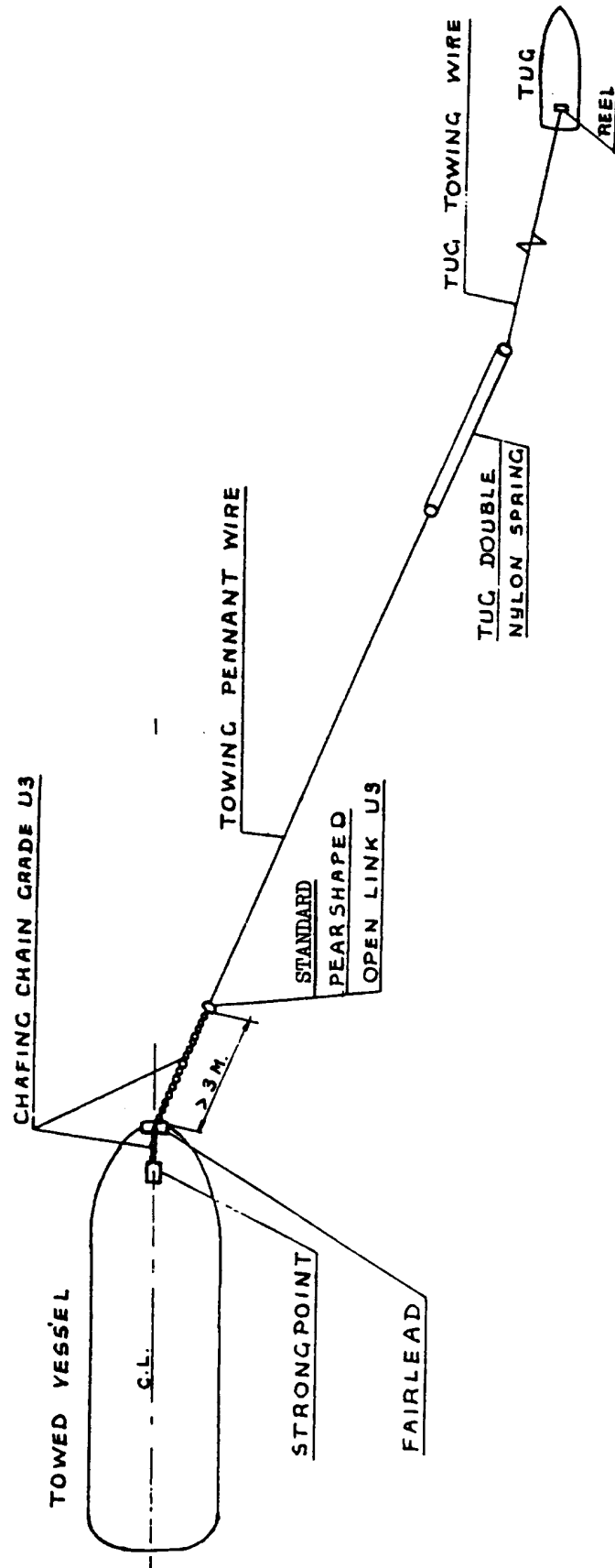


FIGURE 1 EXAMPLE OF TANKER TOWED FROM THE BOW

2.4 Strongpoint

The towing connection should be a stopper or bracket or other fitting of equivalent strength and ease of connection to the satisfaction of the Administration.

2.5 Fairleads

- .1 Size Fairleads should have an opening large enough to pass the largest portion of the chafing chain, towing pennant or their connections. The minimum opening should be an oval with horizontal axis of at least 600 mm and vertical axis of 450 mm.
- .2 Type Fairleads should be constructed so that the chafing chain will be constrained within the fairlead during the towing operation.
- .3 Geometry Fairleads should be configured to avoid the risk of fouling when a strain is taken on the chain and to minimize the reduction in strength of the chafing chain when the chain is at a 90° angle to the fairlead. The ratio of the fairlead chain bearing surface diameter to chain diameter should be at least 7:1. The outboard lips of the fairleads should as far as practicable be flush with the bulwarks. The inboard end of the fairlead should be fitted to avoid fouling of any part of the towing system when under load or being handled.
- .4 Vertical location The fairleads should be located as close as possible to the deck and, in any case, in such a position that the chafing chain is approximately parallel to the deck when it is under strain between the strongpoint and the fairlead.

2.6 Chafing chain

- .1 Stowage The chafing chain should be stowed in such a way as to be rapidly connected to the strongpoint.
- .2 Length The chafing chain should be long enough to ensure that the towing pennant remains outside the fairlead during the towing operation. A chain extending from the strongpoint to a point at least 3 m beyond the fairlead should meet this criterion.
- .3 Construction The chafing chain should be 76 mm in diameter, grade U-3, stud link chain.
- .4 Connecting links One end of the chafing chain should be suitable for connection to the strongpoint. The other end should be fitted with a standardized pear-shaped open link with the dimensions shown in figure 2. Connecting links should be constructed of grade U-3 steel.

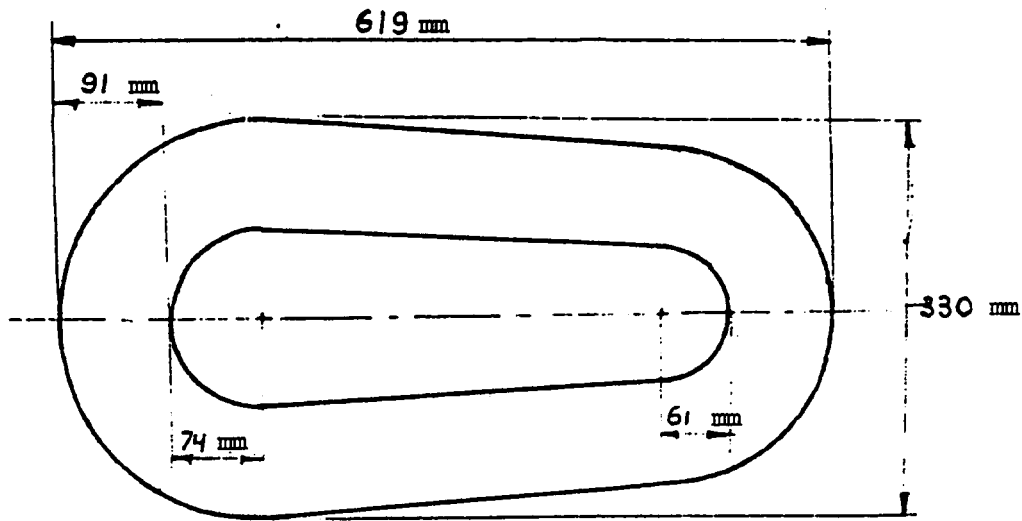


FIGURE 2 **STANDARDIZED PEAR SHAPED LINK**

2.7 Fittings for connection

Tankers should be fitted in the bow and stern with suitable fittings which facilitate passing the towing pennant from the rescue vessel using the rescue vessel's power.

3 Information to be available for a towing vessel

3.1 Any ship requiring towing assistance should have available on board information concerning emergency towing arrangements at the bow and stern. A standard list of such information is given in the appendix to this Recommendation.

3.2 This information should be displayed permanently on the navigating bridge or be otherwise readily available for immediate transmission to the towing vessel.

4 Existing tankers

When considering the requirements in paragraph 2 for tankers greater than 100,000 tones deadweight built before adoption of this Recommendation, the Administration should take into account existing fittings and arrangements and permit their use wherever reasonable and practicable. Notwithstanding the above, the requirements in paragraph 2.6.4 should be maintained.

APPENDIX

LIST OF INFORMATION TO BE TRANSMITTED
TO THE TOWING SHIP

- 1 Usable strongpoints
 - Type
 - Dimensions
 - Working strength in tones (one half ultimate strength)
- 1.1 For a stopper
Maximum and minimum size of chain accepted.
- 1.2 For a towing bracket
 - Clearance width between side plates
 - Length and thickness of towing bracket pin
 - Clear distance between pin and base plate
 - Distance between back of pin and front of side plates
- 1.3 For bitts (ships not fitted with special strongpoint)
 - Diameter of bitts
 - Possibility of using two pairs of bitts simultaneously
 - Working strength in tonnes (one half ultimate strength)
- 2 Fairleads
 - Type
 - Internal dimensions (dimensions of horizontal and vertical axes)
 - Distance between fairlead and strongpoint
 - Position in relation to ship's centerline and deck
- 3 Other components available on board
 - 3.1 Existence of a chafing chain Diameter
Grade
Length beyond fairlead Dimensions of open link
 - 3.2 Existence of a towing pennant wire Diameter
Length
Strength
 - 3.3 Other components, if any
Possibility of using ship's winches in order to haul a towing wire on board.