

ANNEX 7

RESOLUTION MSC.35(63)  
(adopted on 20 May 1994)

ADOPTION OF GUIDELINES FOR EMERGENCY  
TOWING ARRANGEMENTS ON TANKERS

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization concerning the functions of the Committee,

RECALLING ALSO that the Assembly, at its thirteenth session, when adopting resolution A.535(13) concerning Recommendation on emergency towing requirements for tankers, requested the 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,

NOTING that tankers, including oil tankers, gas carriers and chemical tankers, in emergencies such as complete mechanical breakdowns, may need to be towed out of danger, and that technologically advanced towing arrangements have been developed since the adoption of resolution A.535(13), whose provisions need revision to incorporate new towing concepts,

NOTING ALSO that the new regulation V/15-1 of the International Convention for the Safety of Life at Sea, 1974, as adopted by the Committee in May 1994, requires that all tankers of not less than 20,000 tonnes deadweight shall be fitted with an emergency towing arrangement, the design and construction of which shall be approved by the Administration based on the Guidelines developed by the Organization,

HAVING CONSIDERED the recommendation made by the Sub-Committee on Ship Design and Equipment at its thirty-seventh session,

1. ADOPTS the Guidelines for Emergency Towing Arrangements on Tankers, the text of which is set out in the Annex to the present resolution and which supersedes resolution A.535(13);
2. RECOMMENDS that all Governments concerned take appropriate steps to implement the Guidelines.

ANNEX

GUIDELINES FOR EMERGENCY TOWING  
ARRANGEMENTS ON TANKERS

1 PURPOSE

1.1 Under regulation V/15-1 of the 1974 SOLAS Convention, as amended by resolution MSC.31(63) in 1994, new and existing tankers of 20,000 tonnes deadweight and above shall be fitted with an emergency towing arrangement, the design and construction of which shall be approved by the Administration, based on the Guidelines developed by the Organization.

1.2 The present Guidelines are intended to provide standards for the design and construction of emergency towing arrangements which Administrations are recommended to implement.

1.3 For existing tankers fitted with the emergency towing arrangements in accordance with resolution A.535(13), the existing towing arrangements forward of the ship may be retained, but the towing arrangements aft of the ship should be upgraded to comply with the requirements of the present Guidelines.

2 REQUIREMENTS FOR THE ARRANGEMENTS AND COMPONENTS

2.1 General

The emergency towing arrangements should be so designed as to facilitate salvage and emergency towing operations on tankers primarily to reduce the risk of pollution. The arrangements should at all times be capable of rapid deployment in the absence of main power on the ship to be towed and easy connection to the towing vessel. Figure 1 shows arrangements which may be used as reference.

2.2 Towing components

The major components of the towing arrangements should consist of the following:

	<u>Forward of ship*</u>	<u>Aft of ship</u>	<u>Strength requirements</u>
Pick-up gear	optional	Yes	---
Towing pennant	optional	Yes	Yes
Chafing gear	Yes	Depending on design	Yes
Fairlead	Yes	Yes	Yes
Strongpoint	Yes	Yes	Yes
Roller pedestal	Yes	Depending on design	---

\* See paragraph 3.1.4.

## 2.3 Strength of the towing components

- 2.3.1 Towing components as specified in 2.2 for strength should have a working strength of at least 1,000 kN for tankers of 20,000 tonnes deadweight and over but less than 50,000 tonnes deadweight, and at least 2,000 kN for tankers of 50,000 tonnes deadweight and over (working strength is defined as one half ultimate strength). The strength should be sufficient for all relevant angles of towline, i.e. up to 90° from the ship's centreline to port and starboard and 30° vertical downwards.
- 2.3.2 Other components should have a working strength sufficient to withstand the load to which such components may be subjected during the towing operation.

## 2.4 Length of towing pennant

The towing pennant should have a length of at least twice the lightest seagoing ballast freeboard at the fairlead plus 50 m.

## 2.5 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.

## 2.6 Strongpoint

The inboard end fastening should be a stopper or bracket or other fitting of equivalent strength. The strongpoint can be designed integral with the fairlead.

## 2.7 Fairleads

### 2.7.1 Size

Fairleads should have an opening large enough to pass the largest portion of the chafing gear, towing pennant or towing line.

### 2.7.2 Geometry

The fairlead should give adequate support for the towing pennant during towing operation which means bending 90° to port and to starboard side and 30° vertical downwards. The bending ratio (towing pennant bearing surface diameter to towing pennant diameter) should be not less than 7 to 1.

### 2.7.3 Vertical location

The fairlead 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.

## 2.8 Chafing chain

Different solutions on design of chafing gear can be used. If a chafing chain is to be used, it should have the following characteristics:

### 2.8.1 Type

The chafing chain should be stud link chain.

### 2.8.2 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.

### 2.8.3 Connecting limits

One end of the chafing chain should be suitable for connection to the strongpoint. The other end should be fitted with a standard pear-shaped open link allowing connection to a standard bow shackle.

### 2.8.4 Stowage

The chafing chain should be stowed in such a way that it can be rapidly connected to the strongpoint.

## 2.9 Towing connection

The towing pennant should have a hard eye-formed termination allowing connection to a standard bow shackle.

## 2.10 Prototype test

Designs of emergency towing arrangements in accordance with these Guidelines should be prototype tested to the satisfaction of the Administration.

## 3 READY AVAILABILITY OF TOWING ARRANGEMENTS

3.1 To facilitate approval of such equipment and to ensure rapid deployment, emergency towing arrangements should comply with the following criteria:

- .1 The aft emergency towing arrangement should be pre-rigged and be capable of being deployed in a controlled manner in harbour conditions in not more than 15 min.
- .2 The pick-up gear for the aft towing pennant should be designed at least for manual operation by one person taking into account the absence of power and the potential for adverse environmental conditions that may prevail during such emergency towing operations. The pick-up gear should be protected against the weather and other adverse conditions that may prevail.
- .3 The forward emergency towing arrangement should be capable of being deployed in harbour conditions in not more than 1 h.

- .4 The forward emergency towing arrangement should be designed at least with a means of securing a towline to the chafing gear using a suitably positioned pedestal roller to facilitate connection of the towing pennant.
  - .5 Forward emergency towing arrangements which comply with the requirements for aft emergency towing arrangements may be accepted.
  - .6 All emergency towing arrangements should be clearly marked to facilitate safe and effective use even in darkness and poor visibility.
- 3.2 All emergency towing components should be inspected by ship personnel at regular intervals and maintained in good working order.

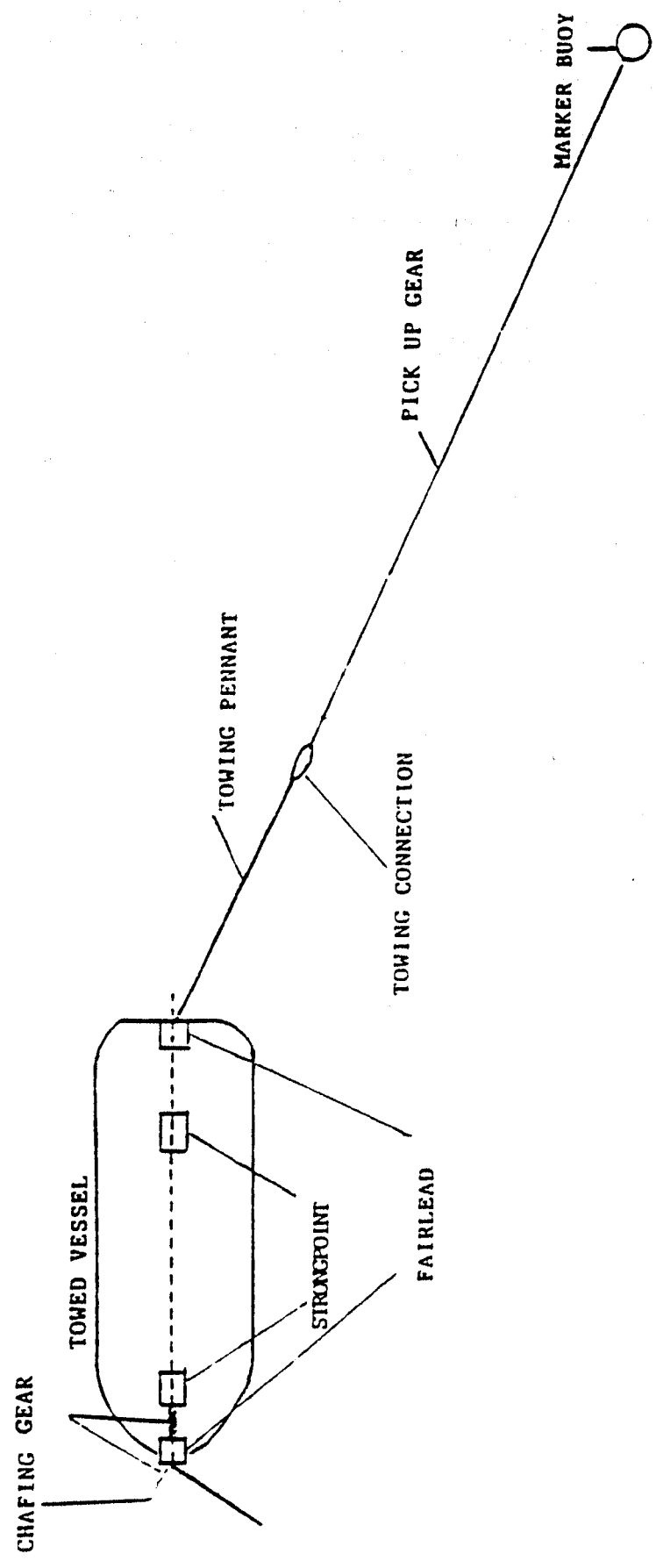


FIGURE 1 TYPICAL EMERGENCY TOWING ARRANGEMENTS

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