

# **General Guide to Safety** **During Towing and Lightering Operations**

## **1. Tropical Cyclone Warning**

- 1.1 Tropical cyclones can occur as early as May till as late as November. During the said period, information and warnings of tropical cyclones are broadcast frequently. Lighter operators and persons in charge of lighters should carry with them a radio and listen to the weather forecasts throughout the tropical cyclone season. Appropriate preventive measures should be taken well beforehand.
- 1.2 Upon the issuance of No. 1 tropical cyclone warning signal, lighters which are not involved in marine works or cargo operations should proceed to the nearest typhoon shelter, sheltered anchorage or designated mooring area. They should moor well within the anchorage, and away from entrances, so as to leave room for late-comers to gain entry. Upon the issuance of No. 3 tropical cyclone warning signal and depending on the direction and speed of the storm, all operators should take full precautions for the safety of the lighters.

## **2. General**

- 2.1 Crew members on tugs, dumb steel lighters and barges should wear a safety helmet (protective headgear) when on the deck of these vessels, especially when engaged in towing, berthing or unberthing and cargo operations. Owners and operators should provide a sufficient number of safety helmets for the crew of each vessel and to ensure they are worn.

## **3. Anchoring**

- 3.1 The crew should be familiar with the operation of windlass and anchors, which have to be maintained in good working condition at all times.

- 3.2 The appropriate type, size and weight of an anchor and its associated equipment should correspond with the type, size, weight and windage of the lighter.
- 3.3 Anchors, while housed and not in use, should be properly secured to guard against accidents or damage.

#### 4. **Preparation for the Voyage**

- 4.1 Lighter operators should ensure that the cargo is properly stowed and secured.
- 4.2 Hatch covers, if any, should be secured in position, properly battened down and covered with tarpaulin.
- 4.3 Cargo gear should be properly secured. In particular, derricks or cranes should be lowered and lashed properly to prevent them from swinging as a result of the movement of the barge.
- 4.4 No person should be allowed to work overside while the lighter is underway.

#### 5. **Towing**

- 5.1 Towing operations may result in excessive loads being applied to ropes, fairleads, bitts and connections. A sudden failure of any element in the towing arrangements may cause death or serious injury to persons.
- 5.2 All towing equipment, including the tow ropes should be of the appropriate strength and size, adequately maintained, free from defects and excessive wear and inspected before use so as to ensure that they are in a good working condition and suitable for the intended towing operation.

- 5.3 Taking strain on the tow ropes should only be done after all crew members are clear from the <sup>4</sup>aft deck of the towing vessel.
- 5.4 The tow ropes are to be led and secured properly, and are to be capable of being released quickly from the towing hook on the towing vessel.
- 5.5 The tow ropes should normally be released only when there is no stress on them. Always ensure that the tow ropes are safely clear from the towing vessel and released before starting any engine movements.
- 5.6 Do not use a retrieving line (not messenger line) to recover the tow rope as it is difficult to pay out the tow rope and the retrieving line simultaneously in a safe manner, and the chances of the retrieving line getting entangled with vessel fixtures are very high.
- 5.7 Persons involved in a towing operation should be suitably experienced and sufficient in number, and they should be warned of the possibility and results of sudden failure of the tow line.
- 5.8 The length of towline shall not exceed the length of the vessel being towed or two and a half times the length of the towing vessel whichever is the greater. Under no circumstances other than in an emergency situation involving safety of life or of the vessels concerned shall the length of the towline exceed 100 metres.
- 5.9 Whenever it is safe and practical, consideration should be given to adopting the method of towing alongside.
- 5.10 Single tug shall not be in control of more than two lighters, as this being the maximum number of lighters that may be secured together during any towing operation.
- 5.11 Any lighter intending to berth alongside the seawall in the vicinity of bridges should be assisted by 2 tugs.

- 5.12 When navigating in Kap Shui Mun and Ma Wan Channel, extreme caution should be exercised.
- 5.13 All those involved in towage operations and in navigating are reminded of their obligation to keep a proper lookout under the International Regulations for Preventing Collisions at Sea 1972; and to ensure that the tows display proper navigation lights and shapes and make proper sound signals as required by the Regulations.
- 5.14 No other lights should be exhibited, as they may be mistaken for the lights specified in the said Regulations or impair the visibility or distinctive character of the specified lights, or disrupt the keeping of a proper lookout or the safe navigation of other vessels.

## **6. Making Fast and Casting Off**

- 6.1 Operators should ensure that lighters are properly secured before casting off a tow.
- 6.2 A sufficient number of men must be made available on site during making fast and casting off operations. Persons involved in a towing operation should be adequately briefed about their duties and the safety precautions to be taken.
- 6.3 Suitable means of communication should be provided between the towing vessel and the vessel being towed. The indiscriminate use of loudhailers, particularly at night, should be avoided so as to minimize the possible nuisance to nearby residents.

## **7. Clearance under Bridges**

- 7.1 The underbridge clearances of the navigation channels at the Kap Shui Mun, Tsing Ma Bridge, Tsing Tsuen Bridge and Tsing Yi Bridge, Stonecutters Bridge, Tung Chung Bridge and Ap Lei Chau Bridge are

clearly displayed on the bridges.

7.2 The underbridge clearances are as below:

<b>Name of Bridge</b>	<b>Underbridge Clearance</b>
Kap Shui Mun Bridge	41 metres
Tsing Ma Bridge	54.6 metres <sup>1</sup>
Tsing Tsuen Bridge	17 metres
Tsing Yi Bridge	17 metres
Stonecutters Bridge	68.5 metres
Tung Chung Bridge	8 metres
Ap Lei Chau Bridge	14 metres
Tuen Mun-Chek Lap Kok Link	Remarks <sup>2</sup>
Hong Kong Link Road	

7.3 All coxswains and lighter operators are reminded to ensure that a vessel with any derrick, cargo or superstructure exceeding the allowable headroom clearances should not navigate under or in the vicinity of the bridges.

7.4 Operators should exercise extreme care and caution when operating lighters near any bridge or in the vicinity of highways, wharves, etc. to prevent the derrick of the lighter to contact any port facilities, in particular, when vessels are operating in the Rambler Channel Typhoon Shelter. They will be held responsible for any damages caused.

Marine Department

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<sup>1</sup> The height restriction at the Tsing Ma Bridge (TMB) Area is relaxed from 53 metres (above sea level) to 54.6 metres (above sea level) at any time, and to 57 metres (above sea level) during the period of Specified Hours.

<sup>2</sup> Please refer to Schedule 5 to the Shipping and Port Control Regulations (Cap. 313A) for the height restrictions of different areas of Tuen Mun-Chek Lap Kok Link (Area No. 1 to 3) and Hong Kong Link Road (Area No. 1 to 4).