Focus on Emergency Towing

DEPARTMENT OF ECOLOGY
State of Washington

Spill Prevention, Preparedness, & Response Program **April 2014**

Emergency towing prevents spills

For many years, Washington State has focused on emergency towing as a spill prevention measure for vessels. We recommend ships prepare for emergency towing by:

- Identifying emergency towing equipment on board.
- Developing procedures for how to deploy the equipment.
- Training and drilling personnel on those procedures.

Ideally, this information is included in your International Safety Management (ISM)-compliant Safety Management System (SMS). The International Maritime Organization (IMO) adopted guidelines for emergency towing in May 2008. **MSC 1/Circ. 1255** helps operators prepare ship-specific emergency towing procedures for ships subject to International Convention for Safety of Life at Sea (SOLAS) regulation II-1/3-4. These procedures should be considered as part of the emergency preparedness requirements of paragraph 8 of part A of the ISM Code. The IMO guidelines help establish emergency towing procedures and an emergency towing booklet.

Since January 1, 2012, all cargo and passenger ships 500 gross tons or larger and tankers 20,000 deadweight tons or larger have been required to maintain an on-board emergency towing booklet containing ship-specific emergency towing procedures. Shipboard personnel are required to be trained in these procedures.

Emergency towing equipment and emergency towing drills are required on tankers of 20,000 deadweight tons or larger. Emergency towing equipment and drills are not required on cargo and passenger ships, but are encouraged.

For ships without dedicated emergency towing equipment on board:

- Identify strong points forward and aft to which an emergency tow line can be attached. These could be mooring bitts fore and aft, the anchor chain or the anchor windlass on the bow. The safe working loads of connection points should be identified beforehand. Guidance on towing and mooring equipment can be found in MSC/Circ. 1175. If the anchor chain is used as the point of connection, keep the anchor chain from running out by using pawls or other chain stoppers. DO NOT DEPEND ON THE ANCHOR WINDLASS BRAKE ALONE.
- Maintain tow lines, towing pennants or bridles of adequate strength that can be attached to a strong point and passed through a chock to the water. Strong synthetic mooring lines

WHY IT MATTERS

This focus sheet explains Washington State's expectations for emergency towing preparations onboard vessels operating in state waters. Oil spills have occurred because of lost propulsion or steering, grounding, or a hull breach resulting in release of cargo or bunkers. Emergency towing may have prevented the spill or mitigated its impact.

*The information in this focus sheet is for guidance only. Emergency towing equipment, procedures, and training should be approved by the operator of your ship.

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may be adequate to stop the ship drifting until a stronger tow line is deployed. Other types of mooring lines are not recommended for emergency towing.

Emergency towing procedures, training, and drills:

Written emergency towing information should be kept in an Emergency Towing Booklet on the bridge with the other emergency procedures/checklists, in a forecastle space, and in the ship's office or cargo control room. An electronic copy should also be kept for quick distribution to concerned parties.

It is essential to ensure crew members are trained to safely connect and deploy the equipment under emergency conditions. The crew should conduct emergency towing drills at least every six months or when a significant number of crew members are replaced.

Sample emergency towing checklist

Actions of the Master (M) of the disabled vessel and the Towing Vessel Operator (TVO)			√
1.	M	Establish communication with local maritime authorities and towing vessel.	
2.	M/TVO	Maintain radio communication while connecting the tow line and during towing.	
3.	M/TVO	Display the appropriate lights and day shapes for the vessel not under command and for the towing vessel.	
4.	M/TVO	Plot the disabled ship's position frequently, and calculate set and drift. Communicate position, set and drift frequently to local authorities and the towing vessel(s) assisting.	
5.	M/TVO	Transmit radio warnings periodically (every 15 minutes unless otherwise agreed upon with maritime authorities).	
6.	M/TVO	Determine whether the disabled ship should be towed from the bow or the stern to minimize damage or improve handling under tow.	
7.	M	Determine the most suitable strong points for the tow line connection, considering the safe working load and breaking strength of the tow lines.	
8.	M/TVO	Consider the size, horsepower, and maneuverability of the towing vessel(s) when deciding upon the towing arrangement.	
9.	M	Ensure that electrical power, hydraulic pressure, compressed air, or steam is available for deck machinery such as winches and windlasses. If power is not available for deck machinery, determine alternative strategy to deploy towing gear.	
10.	M	Choose fixed fairleads or chocks with the largest possible radius of curvature for the tow line or bridle to ensure maneuverability while towed and to prevent damage to the wire or bridle.	
11.	M/TVO	Determine how the tow line will be passed between the disabled ship and the towing vessel, including the use of a line-throwing appliance, if available. If a helicopter is assisting, make preparations for helicopter operations.	
12.	M/TVO	Ensure proper personal protection equipment is worn. ENSURE THAT PERSONNEL STAY OUT OF THE LINE OF PULL OF THE TOW LINE, PENNANT, AND BRIDLE LEGS.	
13.	M/TVO	Ensure proper tools are readily available near tow line or bridle connection point(s).	
14.	M/TVO	Ensure that tow line connection points are as free of obstructions as possible.	
15.	M/TVO	Decide on the towing plan and how often communications will occur once the tow is started.	

Additional factors to take into consideration

- The greatest tow line stress occurs when as the inertia of the disabled ship is overcome and if yawing is experienced. It is at these times that the tow line is most likely to part.
- If the ship is towed from the bow, use the rudder to maintain a steady course; if the ship does not have steering, secure the rudder amidships to minimize damage. If the ship is

being towed from the stern, secure the rudder amidships to prevent it going hard-over as the ship gathers sternway which makes it extremely difficult to maneuver during towing.

- DO NOT USE SHIP'S PROPULSION UNLESS TOLD TO BY THE TOWING VESSEL.