

**KISH P & I LOSS PREVENTION**  
**CIRCULAR KPI-LP-33-2012**  
***(Contact & Fender Damage during an STS Operation)***

➤ **Accident in Brief:**

A loaded VLCC was preparing to carry out an STS operation offshore. The 'daughter' or receiving vessel into which cargo was to be lightered was also a VLCC and was at anchor. The vessel stopped parallel to the receiving tanker and approximately 150 metres off it, and then two large tugs began pushing the mother VLCC bodily towards the lightering vessel.

When the two vessels were about 10 metres apart, a strong gust of wind caused the lightering vessel's bow to yaw to starboard in her anchored position and the two vessels' bows made contact. Apart from inflicting some damage to the internals in way of the side ballast tanks, the impact ruptured the forward pneumatic fender. As the deflated fender was crushed between the two hulls, its external chains and metal fittings created deep gouges and scratches on the shell plating of both vessels. While a tug was deployed to control the yaw of the lightering vessel, lines were quickly passed between the vessels and the mooring operation was completed without further incident.

➤ **Result of investigation:**

- ✓ The mooring operation had been properly planned and an experienced mooring contractor specializing in STS operations had been appointed by the charterers;
- ✓ Sufficient number of fenders were deployed on the lightering vessel by the mooring company;
- ✓ STS checklists were completed correctly and the mooring plan was agreed with the Mooring Master;
- ✓ The mooring operation was planned for daylight hours only;

- ✓ The weather and sea conditions at the time of approach were favourable for the planned operation, however, when the vessels were about 10 metres apart a gust estimated to be about 25 knots suddenly blew across the heading of the two vessels;
- ✓ Drug and alcohol tests were conducted onboard and all were negative.

➤ **Root cause/contributory factors:**

- ✓ Too much reliance being placed on the Mooring Master's knowledge and experience;
- ✓ Mother ship's bridge team failed to observe the approach of strong gust, being fully engrossed only in the mooring operation.

➤ **Corrective/preventative actions:**

- ✓ Fleet instructions issued reminding Masters and bridge teams to:
- ✓ Be aware that the master is overall in charge of STS operations and the Mooring Master operates only in an advisory capacity;
- ✓ Promptly raise any concerns with regard to the manoeuvre(s) being planned or executed, with the master exercising his authority to override actions of the Pilot / Mooring Master to ensure safety of life, property and environment;
- ✓ Be aware of the prevailing and developing environmental and traffic conditions, and abort the manoeuvre or operation in progress if the safety of the vessel should be compromised;
- ✓ Record all events and information in the bridge log book appropriately.



Furthermore when an STS operation is to be carried out, if the sizes of the ships are nearly the same; it is recommended that the Mother (laden) vessel remain at anchor & the daughter vessel to approach her; with or without tug-boats or pilot. This is more advisable action due to various reasons some of which are quoted below:

- 1) Handling & conning of the lighter vessel is easier; it requires less motive power & manoeuvre. It surely has the drawback of being affected more by the wind especially in gusty weather. Larger windage area by the lighter vessel can be taken into advantage for approach & double-banking and if tug-boats are utilized, they can assist in correcting & controlling the movements.
- 2) Passing ropes & warping lines from lighter vessel to mother vessel is easily accomplished.

➤ **Further Info Concerning STS Operations:**

Resolution MEPC.186 (59) was adopted at MEPC 59 and contains a new Chapter 8 to MARPOL Annex I on the prevention of pollution during the transfer of oil cargo between oil tankers at sea. The new regulation applies to any oil tanker of 150 GT and above engaged in the transfer of oil cargo between oil tankers at sea (STS operations). Bunker operations and oil transfer operations associated with fixed or floating platforms are excluded.

Affected oil tankers involved in STS operations will need to carry on board an approved STS operations Plan describing how STS operations are to be conducted. STS operations Plan approval is required not later than the date of the first annual, intermediate or renewal survey of the ship under MARPOL Annex I to be carried out on or after 1 January 2011.

The STS operations Plan shall be developed in accordance with the requirements in IMO "Manual on Oil Pollution, Section 1, Prevention" as amended, and the ICS and OCIMF "Ship to Ship Transfer Guide, Petroleum, fourth edition, 2005. The STS operations Plan may be incorporated into an existing Safety Management System required by the chapter IX of SOLAS, 1974, as amended, if that requirement is applicable to the oil tanker in question. However, it does not remove the need for the plan to be approved as required by the resolution. Operations conducted on or after 1 April 2012 must be in accordance with the approved plan. Records of STS operations shall be recorded in the Oil Record Book and are to be retained on board for a period of not less than three years since the transfer occurred. Any oil tanker subject to the regulation that plans STS operations within the territorial sea or the Exclusive Economic Zone of a Party to MARPOL, shall notify the relevant coastal state Party not less than 48 hours in advance of the scheduled STS operations.