

KISH P & I LOSS PREVENTION CIRCULAR KPI-LP-94-2012 ***(VLCC colliding with Jack-up barge; Lessons to be Learnt)***

► Narrative:

A VLCC in ballast was anchored off a major oil exporting port. As per instructions from the loading terminal, she weighed her anchor at about 2330 hrs and proceeded from the waiting area to meet the berthing pilot at the boarding area at 0130 hrs, which was about 20 miles to the south. Pre-departure procedures and checklists were duly completed and, as per the passage plan, the tanker initially steered due south in order to join the SW-bound traffic lane from the side. Positions were being plotted on the approach (paper) chart at intervals of about six minutes.

At 2345 hrs, while proceeding on a course of 180 degrees at about 12 knots, the OOW acquired a target located in the NE-bound lane, bearing a few degrees on the starboard bow at about 5.5 nm distance. A single white light was seen along the bearing of the target, and the bridge team presumed it to be a small local craft. The plot indicated that the target was proceeding slowly in a NW'ly direction, and it was assumed that it was intending to cross the traffic lanes.

At 0005 hrs, the tanker entered the SW-bound lane from the west side and altered her course to 226°, aligning herself with the general direction for that lane. By this time, the other vessel was located within the separation zone, bearing about two points on the tanker's port bow and about 2 miles off. Based on the target's low speed vector, it was again assumed that the small craft would keep clear of the VLCC navigating along the traffic lane.

At this time, the OOW suddenly saw that the target was actually a self-propelled jack-up barge and was showing the starboard (green) sidelight and was intending to cross ahead of the tanker. In the absence of signals to indicate restricted manoeuvrability, the bridge team of the VLCC treated the barge as a normal power-driven vessel underway and expected it to manoeuvre as the give way vessel in a crossing situation (Rule 15). With the distance rapidly closing, the tanker's Master began an alteration to starboard, away from the barge, but the two vessels collided at about 0015 hrs.

Port control was informed of the incident. Acting on their instructions, the tanker continued the passage to the pilot station, embarked the pilot and proceeded to the holding anchorage, where she anchored at 0405 hrs, pending an investigation into the incident.

► Consequences of the collision:

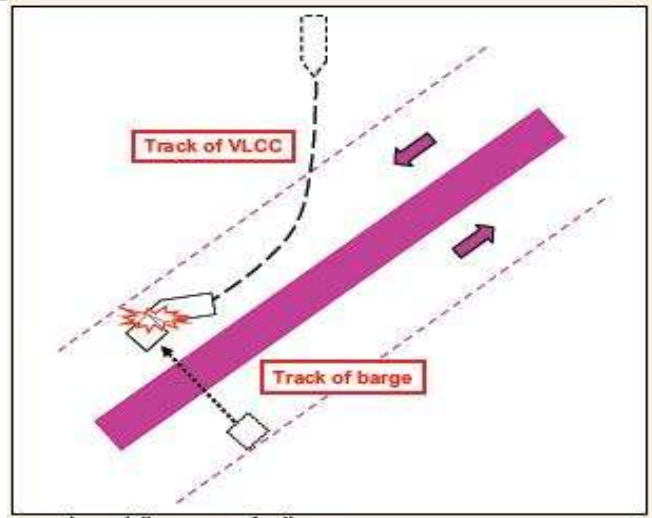
- 1- The large crude oil consignment that was assigned to the tanker had to be shipped on another vessel;
- 2- The ship-owner and manager suffered severe financial loss (loss of charter income, costs for directing the vessel to the nearest repair facility, cost of repairs and other associated costs);
- 3- Huge liability claims were filed against the tanker's owners from the company owning the jack-up barge for damage, repairs, loss of hire and other charges;
- 4- The coastal state imposed a punitive fine for unsafe navigation;
- 5- Loss of reputation;
- 6- Loss of man-hours (both on board and in the office).

► Root cause/contributory factors:

- 1- Ineffective bridge team management;
- 2- Failure to obtain traffic information from the port before commencing the passage and entering the approach TSS;
- 3- Illogical assumption that the other vessel was a small, local craft, when the target's identity was clearly being shown on the AIS;
- 4- The ship's speed of about 12 knots was considered to be excessive and was not reduced promptly when a close quarter situation was developing and there was doubt as to the intentions of the crossing vessel (Rules 6, 7 & 8);
- 5- Failure to communicate doubt by means of prescribed sound/light signals (Rule 34 d);
- 6- Actions to avoid collision were not implemented in sufficient time and were not substantial enough (Rule 8);
- 7- The navigation lights of the jack-up barge were not seen earlier by the tanker's bridge team due to the many obstructions on its deck;
- 8- There was a loss of situational awareness – the bridge team wrongly assumed that there was a charted shoal close to the west of the vessel, when, in fact, it was about 1.5 miles SW.

► Lessons learnt:

- 1- Every member of the bridge team must proactively contribute to safe navigation – in this case, after initially informing the Master about the presence of a 'small coastal vessel' ahead, none of the bridge team members took an active part in the conduct of the vessel or challenged the Master's actions;
- 2- Information on existing and expected vessel movements and other operations in the port and approaches must be obtained from the VTS / port control / pilot station (as appropriate) prior to transiting these areas;
- 3- Assumptions should never be made on basis of scanty information;
- 4- Despite its limitations, the AIS can potentially provide reliable data on a target's identity and movement, if both vessels are equipped and the system is correctly configured;
- 5- Although not advisable, prudent bridge-to-bridge VHF communications at an early stage can assist safe passing between vessels, provided both are sure of each other's identity and location;
- 6- Crew tend to become complacent when they call frequently at a port or region and are more likely to overlook basic precautions;
- 7- All passages should be properly planned and discussed among the bridge team members ensuring that vital parameters are defined and adhered to for each leg during execution and monitoring;
- 8- Risk assessments for all critical movements (e.g. arrival/departure port, narrow channels, restricted waterways, TSS etc.) must include the possibility of encountering 'rogue' give way vessels that may not comply with Colregs, and appropriate contingencies and escape routes should be included in the passage plan;
- 9- The bridge team must assess the relative movement of traffic in the area before making an alteration of course (e.g. trial manoeuvre function on the ARPA), and they must not hesitate to slow down or stop the vessel to avoid a collision.



Hypothetical illustration of collision

► **Corrective/preventative actions:**

- 1- An urgent alert was sent to the fleet, highlighting the incident with the instruction to hold a special meeting at the earliest to discuss the report and review all aspects of bridge procedures on board;
- 2- A campaign on safety of navigation with special emphasis on bridge team management, maintaining situational awareness and collision regulations will be initiated by the company, comprising of:
 - a) A video on safe navigation and bridge team work;
 - b) Onboard navigational audits to be carried out by Masters and visiting superintendents;
 - c) Training sessions conducted on board addressing human element factors including procedures, communications, stress, operational environment, fatigue and culture issues;
- 3- The company's Bridge Procedures Manual has been amended requiring vessels to obtain all relevant information from port control/VTS/local authorities before transiting within port limits;
- 4- Officers will be trained in bridge team management at reputed training institutes and the course will be monitored/reviewed to ensure its effectiveness.