

Casualty Circular No. 23 of 2009

(Regulatory/Guidance/Information)

NO:11-NT(56)/2007

Dated: 07.08.2009

Subject: Shipping Casualty of Tug & Barge as composite unit fitted with Articulated Coupling System during cyclonic weather conditions in Indian waters

NARRATIVE

On 23rd June, 2007 at about 0900 hrs a composite unit of Tug, flag - India, built in 1996, GRT- 241 and Dumb Barge, flag - India, built in 1997, GRT- 1554, entered the anchorage of a Indian port to effect planned mid stream lighterage of iron ore about 24,00MT from a foreign flag ship anchored within the port limits.. By afternoon on 23.6.2007, the port displayed storm signal No.3 i.e. port is threatened by squally weather. The lighterage operations was completed on 23.6.2007 and at 2030 hrs. on the same day, this composite unit with a cargo of 2000 MT. of iron ore in bulk cast off from the mother vessel and proceeded to the nearby port through the port navigational channel. The mother vessel decided to head out to open sea due to inclement weather in the port. The port Vessel Traffic Services (VTS) allowed the Tug and the tow to sail up to nearby port. The weather conditions were severe i.e. wind up to 20-25 knots were experienced during the short voyage. While the tug was about 12-13 miles away from the destination port the fairway buoy, the wind force and the wave height suddenly increased at around 0200 hrs, on 24.6.2007. To counter the wind and sea effect, the Master of the tug decided to steer off course to starboard. The composite unit experienced a heavy sea/wave impact on the starboard side which caused ingress of water in crew accommodation. The Chief Engineer of the tug also noticed a crack on the ship side in line with the engine room forward bulk head. The crack was about 2feet by 2feet inverted 'T' shape through which water was entering into the engine room. While the water was being pumped out with the help of Fire/ General Service & Emergency Pumps, a violent noise due to articulate coupling system failure/dis-positioning was heard by the ship's staff. This resulted the tug to list to port side. Subsequently the articulate coupling shoes broke due to heavy swell and wave prevailing at that time. As a result, the composite unit got detached. Thereafter, the barge made heavy contact on the starboard side of the tug. The tug listed heavily to port side and started sinking by head. The Master of the tug sent a distress message by means of GMDSS (Global Maritime Distress & Safety System) at around 0330 hrs. on 24.6.2007 The Master of the tug abandoned the ship and ordered the crew to enter into a life raft. The life raft was completely shattered into pieces due to strong windy conditions. The Coast Guard and the port's

surface crafts conducted SAR operations. 9 survivors from the tug with their life jacket were rescued from the sea on 24.6.2007 at around 1950 hrs. There was one loss of life i.e. of cook. The tug sank in the vicinity of an island and the dumb barge drifted into the harbor and grounded close to the shore of an island. The tug had 10 k.lt. of diesel oil on board but no spillage of oil was seen or reported

OBSERVATIONS/ANALYSES

- The Master did not consider to implement the contingency plan to deal with the emergency.
- The Master did not take necessary precautions for heavy weather conditions.
- The articulate coupling system failed due to exceptional bad weather conditions
- The tug sailed out with expired Load Line Certificate for the dumb barge.
- The Master failed to use over riding authority in spite of knowing the unit is un seaworthy on account expired Load Line Certificate of the Dumb Barge.
- The Master did not consider to take shelter in protected waters during the heavy weather conditions.
- The Master did not have the No Objection Certificate from the Administration for port clearance to operate in Indian coast.
- No documentary evidence was available to show that Articulate coupling arrangement was inspected either by the flag administration or classification society.
- No alternate arrangement was available to avoid accidental detachment between the tug and the dumb barge.
- Designed pressure of 110 bar might have been exceeded by the articulate coupling arrangement due to heavy wave/swell load.
- The adjacent ship side plating of Articulate coupling was not strengthen that resulted fracture of ship side.
- The company engaged a local pilot at the time of transit without approval of the port.
- The local pilot was possessing only joining contract letter and had not signed on Article of Agreement.
- The local pilot was included in the crew list but was not signed on Article of Agreement.
- The un-authorized local pilot was 72 years old and had not up graded his Certificate of Competency as per STCW '95.
- The minimum safe manning for the tug had limitations to operate within port limits, but the tug was trading out side of the stated limits.

RECOMMENDATIONS/LESSONS LEARNT

- The shipowner and the Master should ensure that all Statutory Certificates and necessary permission for such specialized operations are placed on board prior to departure.
- The shipowner/Master should ensure that the prescribed trading/operational limits and relevant certificates are not violated.
- The Master of the vessel has the responsibility to verify the validity all its certificates and the certificates of towed barge.
- The Shipping company should establish procedures for effective communication, emergency preparedness, Planned Maintenance System (PMS) and effective training to the Master and crew to deal with emergency of this nature.
- During South West monsoon, the vessel should take necessary heavy weather precautions such as rigging of Emergency Towing arrangements and life line of deck etc.
- Master should not hesitate in using his Over Riding Authority during such situations.
- The shipping company/Master/crew should emphasize on the effective implementation of the Safety Management System. The such system should be properly reviewed by the Master/Company for improving the efficiency of ship operation.
- Articulate couplings have wave height and weather restriction. These should be clearly understood by all concerned and respected.
- The Statutory Surveys should include the inspection of Articulate coupling arrangements.
- The tug and the dumb barge should have extra fendering system through out the ship side above the lighterage sea weather condition.
- There should be additional attachment provided between the tug and the dumb barge to withstand the consequences of accidental failure of Articulate coupling system.
- The Port Authorities should make sure that compulsory pilotage is strictly made applicable on all vessels above 200 GRT, especially during the South West monsoon months.
- The Company/Master should ensure that the crew engaged for the intended voyage should be qualified and medically fit meeting National/International regulations.
- The Port Authorities should ensure that appropriate surveillance and communication equipments are available in Port Signal Station and maintained at all the times by competent persons.

Sd/-

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