Casualty Circular No. 8 of 2009

(Regulatory/Guidance/Information)

NO:11-NT(34)/2008

Dated: 17.07.2009

Subject: Collapse of Cargo Crane on board Bulk carrier during cargo operations in Indian port in March, 2008.

NARRATIVE

An Indian flag vessel, type -bulk carrier, while loading cargo of iron ore with its own cargo gear i.e. a crane of SWL 25 MT using an open type grab sustained major damage on 30.3.2008 at around 1905 hrs. This crane broke its skew bearing leaving behind the crane pedestal and part of slew bearing in place on deck. The crane consequently detached from the slewing portion (crane tower along with the gib) and this portion of the crane fell on the hatch pontoon together with the winch motors control cabin. The crane operator who was inside the cabin sustained severe injuries during this incident. The operator was immediately removed to hospital and unfortunately declared dead on arrival. The broken parts of the crane were sent ashore for metallurgical testing. The dock safety inspectorate of the port also carried out the investigation.

OBSERVATIONS / ANALYSISES

- Failure of nuts and bolts connecting the crane column to the control cabin could be one of the contributing factors..
- The crane was excessively used by the owner and operator without following proper maintenance procedure of tightening nuts and bolts.
- The procedure set out by the manufacturer for the said purpose required tightening of bolts every two year and increase in frequency if usage is high.
- The nuts & studs were required to be replaced once every 7 years as per the manufacturer requirements.
- Visual examination indicated no sign of tightening of nuts though the records are contrary to this statement.

- Visual examination also revealed reasonable amount of corrosion on bolts and studs,
- No records were available on duration of replacement of nuts & bolts.
- The metallurgical examination of studs and screws bearing did not throw much light on the cause of the accident.

RECOMMENDATIONS / LESSONS LEARNT:

- Proper condition monitoring of the critical components of the crane is extremely important for efficient and effective functioning of cargo gear.
- Taking into account the excessive exposure of the deck gear to the corrosive atmosphere and usage for cargo operations, the owner or the Master must strictly adhere to the crane manufacturer Planned Maintenance Schedule (PMS) including the periodical replacement of parts /components of cranes.
- The Chief Officer, Junior Officer & attending ship's crew including the safety Officer must carry out visual inspection and operational tests prior arrival of port of loading / discharge. The entire cargo gear should be examined in an systematic manner to prevent reoccurrence of such incidents.
- Shipping companies/ships staff may be urged to give due importance to SMS implementation especially in identification of hazards & near misses on deck.

Sd/-
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