SERIOUS LEG INJURY ONBOARD NOR SUPPORTER

Nor Spring
Nor Sky
Nor Valiant
Nor Spring
Nor Vision

Nor Star

Nor Supporter
Nor Captain
Nor Sun

Nor Offshore 8 vessels
New Building 3 vessels

OPERATIONS

- The Nor Supporter and Nor Sun were supporting the Songa Mercur at West Jurong Anchorage Singapore;
- The Nor Supporter was assigned the task of replacing eight Moorfast anchors for new Stevpris anchors;
- The Nor Supporter master had a recorded history of experience in this field of work;
- The Nor Supporter had previously replaced 5 of the same anchors without any incident;
- The investigation team conducted interviews and re-enacted the scenarios to source the root cause

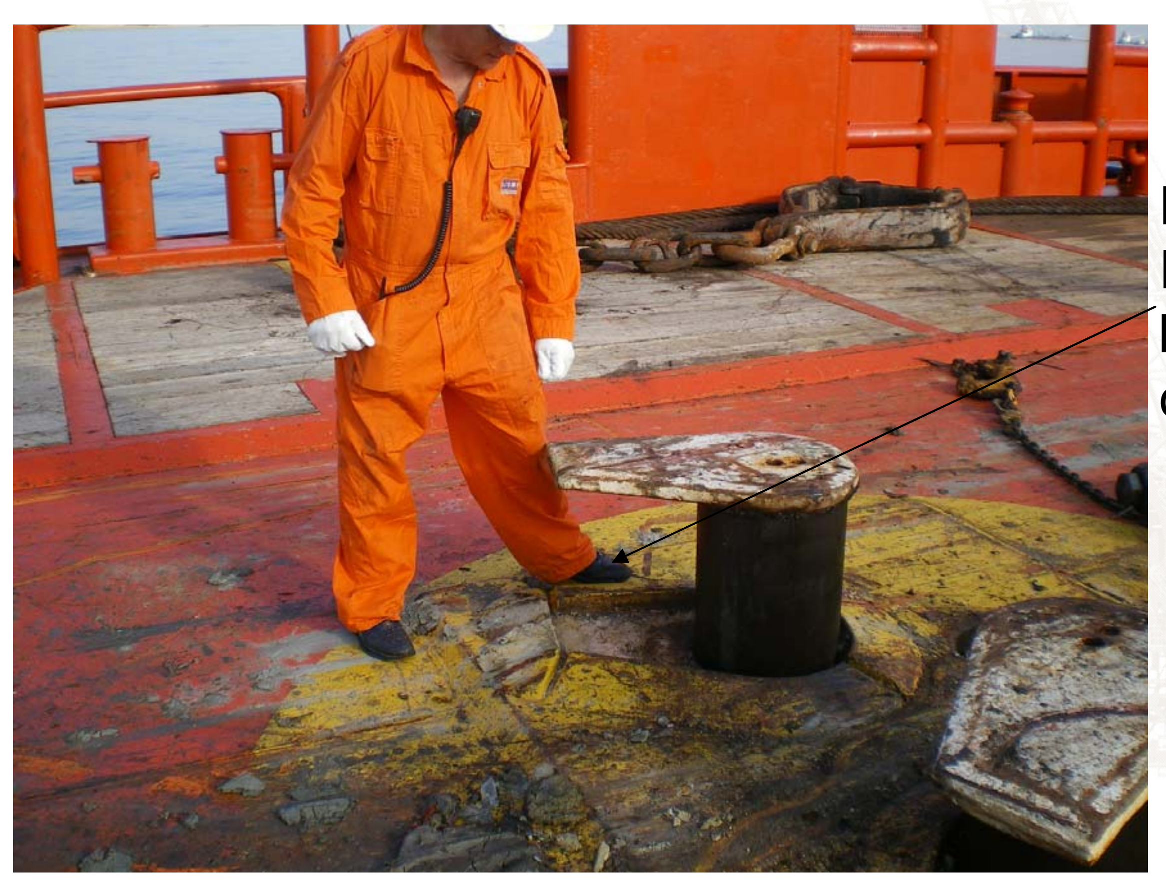
INCIDENT OVERVIEW - 21st of June 2007 @ 0730hrs

- The Chief Officer, 2nd Officer and two IR were on deck preparing Anchors for changeout and resolving loose work wire on drum
- They agreed to use port tugger wire to pull tight the loose work wire on the drum by pulling around the tow pin as suggested by the IR (casualty).
- About 6 Personnels were being transferred from the NOR Sun to the NOR Supporter to witness anchor handling operations (training)
- There was a delay in activating the Tow pin, after the Chief Officer requested the bridge, as Master may have been attending to other task.

INCIDENT OVERVIEW – Continue

- Whilst facing the Towpin, the IR (casualty) started to pull the port tugger to run around the tow pin, but it was caught under the Yellow “Stevpris” anchor (port side, mid ship)
- To free it, the IR turned around, with his back facing the towpin,exerted more force to free it.
- At this point he accidentally stepped in too close to the Tow pin area whilst the tow pins were being activated, and got his right thigh pinned between the activated tow pin’s wire locking plates.
- Personnel from NOR Sun were being transferred to the NOR Supporter at the time of the incident, distracting the Master from focusing on deck activity.

NOR Offshore Ltd.



Possible place where IR's leg may have been caught by the closing towpin plate

This may have been how the IR leg was caught by the closing towpin

Spooling Gear
Tow/ Work Winch
Tuggers
Shark Jaws
Tow pins
Captains
Work Wire

Anchor Handling Deck Layout – Day 2

Peter Smith becomes caught in the pins after releasing the wire

Peter Smith were he was first sighted by the master

Garry Bissett (Mate)

INCIDENT REPORT

- **Crew involved** : IR – 62 yrs with more than 30 yrs experienced
- **Injury Cat** : LTI – Compound Comminuted Fracture to right thigh.
- **Weather** : Light Breeze, good daylight
- **Health/Fatigue** : Good/ Non
- **Treatment** : Evacuated for Urgent Medical assistant ashore.
- **Status** : Repatriated

The Towpin fully locked

Model Causation

- IR was sighted on the deck (aft of the pins) by the master;
- IR was not alerted to the pins being raised. No other crew observed that the wire became stuck on the anchor;
- The conditions of the deck were changing (when the request to raise the pins was given). The deck crew should have been alerted. Similarly, the deck should have made an enquiry on why the pins had not been raised;
- It was established that the pins took an average of 6.5 seconds to be raised. During this time the focus was taken off the deck crew and onto the remaining crew member boarding the Nor Supporter. The crew transfer operation should have been abandoned;

Model Causation

- The plan of the day had changed. Rather than change the priorities, the crew were under unnecessary pressure to keep up.
- Operations should have stopped and a toolbox conducted to re asses the risk;
- Excessive noise on the bridge contributed to the distractions of the operation;
- Conducting simultaneous critical operations (multiple tasks) is the primary cause of the incident;
- There was a time delay from the time the request was given to raise that pins to when the task was performed. The pins were raised on the previous sighting that posed nil danger. That is, the pins were raised without looking on deck;
- Application in effective change management was poor.

- **Root causes: Behavioral Element**

Judgment:

- *The Master being the overall responsible for the vessel operation must recognise changes in job hazards, be willing to stop the job and reassess hazards when change occur and prioritise tasks accordingly to minimise risk associated with each task being conducted.*

Leadership:

- *The Chief Officer who was the delegated officer in charge on deck, was not communicating effectively with IR (casualty) and should have identified the hazards of such a critical process and stopped the job.*

Immediate Corrective actions taken after the Accident:

- Safety Alert was issued to the Fleet highlighting the preliminary facts & findings of the accident.
- Casualty was rendered all the necessary post trauma management support.
- Master and witness interviewed and briefed on the post incident requirement, and the content of HSE/QA manual procedure HES 00-03 which relates to his role and responsibility to such situation.
- All the crew involved were briefed on the HSE/QA manual procedure OMS: 4.631 & 4.60.2. (WHAT IS IT??)
- During the activation of Towing pins, a dedicated person shall monitor the process safely and ensure that all crewmembers are at safe distance until the Tow pins are fully activated.

Corrective Actions to prevent recurrence in future:

- The management has agreed to install an alarm system to alert the Crew members working in the vicinity of the tow pin. Instruction placed on bridge to raise tow pins individually.
- Tow pin area painted in safety colors, highlighting hazardous zone
- During Multi Tasking, The Master or any responsible officer shall ensure that such operations must be carried out safely with due regards to the criticalness of each task that are being performed.
- As the incident was much due to the Human element, a systematic approach to improve this process will be discussed during next HSE/QA safety Management meeting, to make the Master/ Senior officers understand the human behavioral reacting to some adverse condition that may lead to an accomplishment of an accident :
- Management will ensure that all stake holder to have better ownership of every task assign to and use HSE Database Safety Observations Reporting System to identify hazards earlier.