‘Far Sword’ failed tugger winch rigging resulting in injury to Seaman 2nd March 2007

Events leading to the injury

- Vessel delivered from builders June 2006 equipped with light weight tugger wires and associated equipment for ease of manual handling
- During anchor handling at Atwood Eagle the rig's permanent chain chaser pendant failed resulting in the anchor falling to the sea bed

Events leading to the injury

- During operations to recover the anchor chain the rig anchor winch failed resulting in the remainder of the chain falling to the sea bed under the rig
- Far Sword grappled and caught the rig chain and recovered a bight of chain to the deck, hove the bight of chain up the deck and secured one leg in the port karm fork
- Whilst attempting to secure the other leg in the starboard karm fork the grapnel failed causing the chain to run down the deck with shock loading to the port karm fork resulting in it rotating out of the fore and aft line by approx. 15 degrees

Failed PCC

Failed Grapnel

- Grapnel SWL 200 T
- Proof load 300 T
- Load on winch as it came over roller 139T
- Tests indicate cracking during casting repaired by welding and not heat treated

Port Karm Fork out of alignment

Deck Rigging

- With the rig chain now held in the Karm fork it was necessary to now heave the chain up the deck in bights to get the bitter end on board for reaving over the wild cats to stow in the vessel's rig chain lockers
- During this operation it was found necessary to manipulate the chain with the ship's tugger winches to attempt to secure it in the port Karm fork which was out of alignment

Deck Rigging arrangement

Tugger winch operations

- To manipulate the chain into the port Karm fork it was decided to utilise three winches the two aft capstan winches located at the stern of the vessel on each quarter, these are rated with a 15 Tonne pull on the first layer and the port midship tugger winch which is rated with a 24 Tonne pull on the first layer

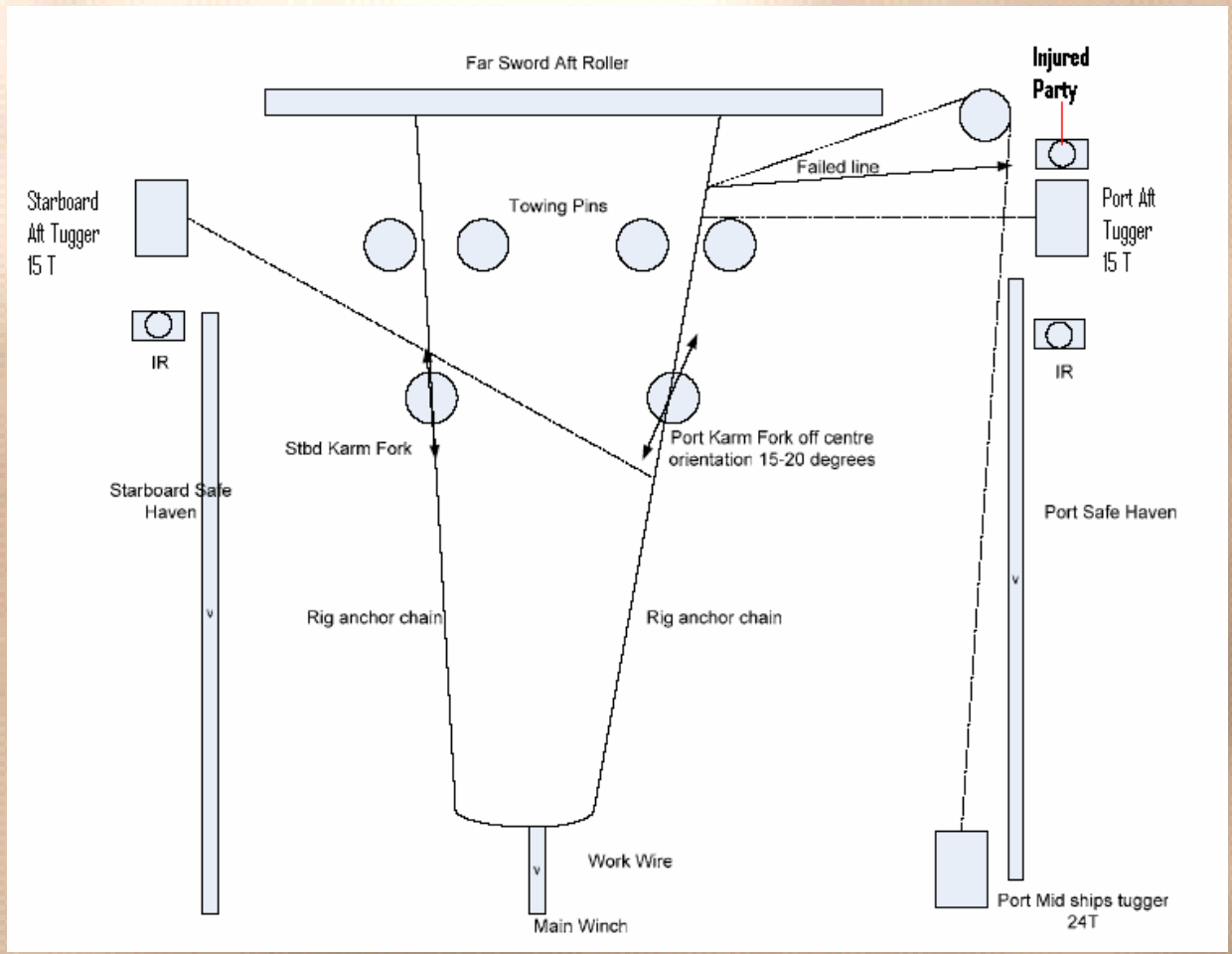
Planning the operation

- Most of the decisions made during the course of the events leading to the equipment failure were taken on the ‘fly’ with no formal procedure being developed for the recovery operation and no Job Hazard Analysis conducted to assess the risks involved in the operation. Consequently no controls were applied to manage the risk

Tugger winch operation

- All three tuggers in use were capable of being operated either locally or by radio remote control
- Due to some unreliability experienced and delays in operation of the radio remotes they were not favoured as the primary control method
- The port midship tugger was being remotely controlled - the aft tuggers were being manually operated

Where people were on deck

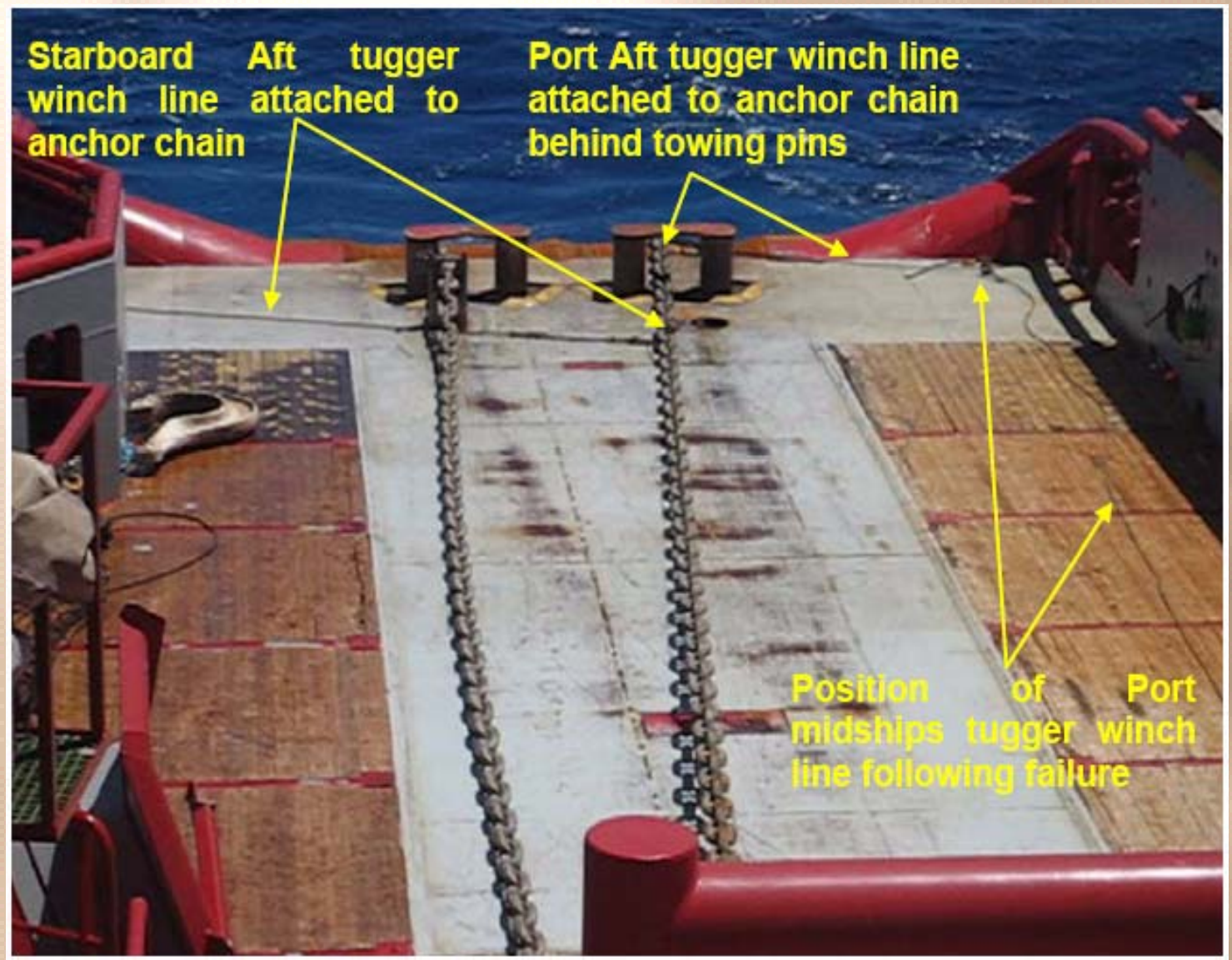


Aft Port Tugger Operating Position

The failure and injury

- The deck rating operating the port aft tugger winch was struck by a recoiling wire and end fittings when a link in the endless chain securing the tugger winch end fittings to the rig chain failed
- Injuries sustained were contusions and bruising to the chest, arms and legs. Treatment was administered on board and he was later medivaced to Exmouth hospital
- He has since fully recovered and returned to work being declared fit on 12th April 2007

Deck of Far Sword following the incident



Investigation Findings

- A procedure did not exist for recovery of chain from the seabed
- A JHA was not conducted prior to performing the task
- The aft tuggers in local operation exposed the operators to potential failed winch lines
- The gear, including the endless chain which failed were underrated for the winches in use

Recommendations and Remedial Actions

- Investigate remote operation of tugger winches from the wheelhouse
- Investigate down-rating of tugger winches so that associated wires and gear can be safely handled from a manual handling perspective with an adequate safety factor
- Develop appropriate JHA’s for recovery of chain from sea bed and associated deck operations

Recommendations and Remedial Actions

- Reinforce to Fleet the need to develop ship specific procedures and JHA's for unplanned tasks
- Test failed components
- Check status of Port Karm fork
- Distribute investigation report to the fleet

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Any Questions?