



South African Maritime Safety Authority

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Marine Notice No. 6 of 2020

Lessons learnt from casualties in the fishing industry

TO ALL FISHING VESSEL OWNERS, OPERATORS, SKIPPERS, OFFICERS AND SEAFARERS.

Summary

The Authority notes with concern the increased occurrence of disabling injuries in the fishing industry and with this notice shares the outcomes of the latest incident investigations. One of the main objectives of a safety investigation into an accident is the prevention of future accidents through the ascertainment of its causes and circumstances.

This notice highlights the following:

1. Dangers of working with cutting machinery onboard fishing vessels,
2. The importance of maintenance and the testing of safety measures,
3. Risk assessments required for all specific jobs during trawling activities.
4. Winch controls on fishing vessels and emergency stop
5. Loss of fingers in production facilities on fishing vessels

Casualty # 1: Unsafe act leads to loss of part of finger

1.1. Background

The casualty occurred on board a factory fishing vessel. A crewman in the process of tailing fish, using a tail cutter machine, cut off a part of his left index finger. The vessel onboarding induction specifically refers to the wearing of steel mesh gloves at this workstation. The crewman worked without the required PPE as the set of gloves available was defective. The injured party failed to report that the required PPE was not available yet continued with his designated operation.

1.2. Statutory Requirements

The Maritime Occupational Safety Regulations, 1994 are definitive on the requirements that the owner carries out a risk assessment to identify potential hazards and that the owner ensures overall compliance with safety measures when working with machinery as containing in Regulation 3 (1) (e)

Regulation 3: Duties of employers and employees

(1) Every employer shall—

(e) Ensure that on board a vessel work is performed, or machinery is used under the general supervision of a person who is fully aware of the hazards connected therewith and who is conversant with the safety measures to be taken or observed to obviate such hazards.

1.3. The lessons

- 1.3.1 A risk assessment should identify the appropriate PPE to be worn before continuing with any operation.
- 1.3.2 Wear the required PPE before continuing with any operation.
- 1.3.3 Report defective or missing PPE.
- 1.3.4 Owners should ensure that risk assessments are carried out for all designated activities.

Casualty # 2: Winch operator injured when caught on the long line gear during hauling operations

2.1. Background

The casualty occurred on board a long line fishing vessel. The winch operator was caught on the dropper line during hauling operations. The operator went around the winch several times and sustained multiple fractures, a dislocated left shoulder and other injuries. The emergency stop was activated but did not function as designed. Although first aid was administered, no further medical advice was sought via the available radiotelephony equipment. The injured party was booked off from work for 12 weeks.

2.2. Lessons to be taken from this casualty

- 2.2.1 Fishing vessels crews are to be properly inducted with respect to safe operations and owners to ensure there exists documented safety procedures specifically for during shooting and hauling operations.
- 2.2.2 Safety emergency stop mechanisms installed for winches on fishing decks to be periodically tested and maintained in good working order.

Casualty # 3: Injury to hand of deckhand whilst involved in fishing gear retrieval on board a fishing trawler

3.1. Background

The casualty occurred on the aft deck of a fishing trawler with a complicated 3-sheave fishing gear retrieval/deployment system. A deckhand, forming part of the deck team on the aft of a trawler during hauling operations, had his hand crushed between a sheave and a wire which was being tensioned up to clear a swivel which had become twisted up. No documented procedure existed for this operation that is performed several times a day.

The communication between the winch operator and the team aft was also not established or formed a part of any documented procedure and this hazard was worsened by the lack of line of sight from the winch controls to the aft sheave system due to the design of the trawling deck.

The injured party was wearing PPE in the form of standard issue rubber gloves. Impact gloves are available on the market and are in use in the offshore industry.

The doctor's report states that full recovery may be possible and that the injured party could return to work after 6 months.

3.2. Statutory Requirements

The Maritime Occupational Safety Regulations, 1994 specifies that;

Regulation 3 Duties of employers and employees

(1) Every employer shall—

(g) Ensure that every employee is aware of the hazards connected with any work to be performed, or machinery to be used by him and that he is conversant with the safety measures to be taken or observed to obviate such hazards.

Read with;

Regulation 36: Appointment, termination of appointment, and functions of safety officers

(3)A safety officer shall, whilst a fishing vessel is in service -

(b) Ensure that the crew comply with any occupational safety policy determined by the employer concerned;

(c) Ensure that the crew maintain a high standard of occupational safety;

(d) investigate the cause of an accident contemplated in section 259(1)(c) of the Act; all hazards or potential hazards to safety including fatigue, that affect or may affect the crew of a vessel in the execution of their work, and all complaints concerning occupational safety.

3.3. Lessons for trawling industry

- 3.3.1 Avoid over complicating the fishing warp attachments used during the retrieval/deployment operations.
- 3.3.2 Carry out a risk assessment of each stage of the fishing operations to identify potential hazards to the safety of the crew.
- 3.3.3 Potential hazards identified must be included in the onboarding induction of the crews required to work in hazardous situations and where necessary a procedure must be documented on the safety precautions of each stage of the shooting and hauling processes.
- 3.3.4 Ensure that toolbox talks prior to each planned action forms part of the shipboard routine.
- 3.3.5 Injuries to hands and fingers are common in the trawling industry and the risk assessments must include the identification of appropriate PPE for specific jobs.

Casualty # 4: Winch controls and the emergency stop mechanism

4.1. Background

The horrific casualty occurred at the line hauler on a long line fishing vessel. A crewmember, working the lines in front of the line hauler, was caught on the line and pulled around the winch several times. The Injured party suffered severe and permanent injuries as a result.

Inspection of the vessel's equipment revealed that the winch speed was not independent from the main engine hydraulic system which resulted in the speed of the winch changing from slow to maximum speed as the main engine load is increased or decreased. At the time of the accident, the main engine's load was increased leading to increased severity of the injuries. No person was at the winch controls at the time. No emergency stop system was in place.

The injured party was airlifted off the vessel at the request of doctors onboard the NSRI vessel that came to her assistance after a radiotelephony request by the skipper.

The report from the hospital the injured party was admitted to be that he would be a complete permanent tetraplegic.

4.2. Statutory Requirements

The Maritime Occupational Safety Regulations, 1994 specifies that;

Regulation 3 Duties of employers and employees

(1) Every employer shall—

e) Ensure that on board a vessel work is performed, or machinery is used under the general supervision of a person who is fully aware of the hazards connected therewith and who is conversant with the safety measures to be taken or observed to obviate such hazards.

(g) Ensure that every employee is aware of the hazards connected with any work to be performed, or machinery to be used by him and that he is conversant with the safety measures to be taken or observed to obviate such hazards.

4.3. Lessons

- 4.3.1 Winches should always be under the control of a competent person who is familiar with the potential hazards in that working space.
- 4.3.2 Carry out a risk assessment of each stage of the fishing operations to identify potential hazards to the safety of the crew. Potential hazards identified must be included in the onboarding induction of the crews required to work in hazardous situations and where necessary a procedure must be documented on the safety precautions of each stage of the shooting and hauling processes.
- 4.3.3 Ensure that winches can be brought to a complete stop in times of an emergency with an emergency cutoff switch in the immediate vicinity of the operator's workstation.
- 4.3.4 Winches to be hydraulically isolated from the main engine hydraulic system or the hydraulic flow/supply to be regulated to ensure a constant operational/service speed of the winch.

Casualty # 5: Loss of fingers in production facilities on fishing vessel

5.1. Background

The casualty occurred on board a side trawler. A crew member was in the process of heading the bycatch of kingklip. The kingklip was larger than the hake processed before the bycatch. While the hake fitted into the slots of the conveyor belt leading to the blade of the heading machine, the kingklip did not fit. The injured party had to hold onto the kingklip as it moved onto the blade. In this instance the kingklip moved at the point of contact with the blade and the injured party's left hand went onto the blade.

The injured party's left 2nd, 3rd and 4th finger was amputated and the 5th finger was partly amputated.

In the previous 24 hours leading to the incident, the injured party had worked for 16 hours with 8 hours of rest. The maximum uninterrupted rest was 4 hours.

5.2. Statutory Requirements

The Maritime Occupational Safety Regulations of 1994, Regulation 3 (1) (g) states that the employer shall:

Ensure that every employee is aware of the hazards connected with any work to be performed, or machinery to be used by him and that he is conversant with the safety measures to be taken or observed to obviate such hazards.

And in Regulation 3 (1) (f)

Ensure that safety measures contained in the applicable Code are complied with.

The Code being referenced is the Code of Safe Working Practices for Fishing Vessels, which advises in 5.9.11 and 5.9.12 that:

- 5.9.11 *Where practicable all moving machinery and blades should be fitted with protective guards and/or safety devices to prevent injury to operators. Blades should be checked regularly for cracks and signs of deformation and be replaced where necessary.*

5.9.12 *Fish-processing machines should be provided with emergency cut-off switches in the immediate vicinity of the operators' workstations. Each conveyor should be provided with its own control that is readily accessible from the workplace and such control should be maintained while processing work is in progress.*

5.3. Lessons

- 5.3.1 Ensure machinery to be used are fit for purpose.
- 5.3.2 The hydraulically powered heading unit had a shut off lever close to the operator, but it was not clearly marked.
- 5.3.3 All risks must be clearly defined and communicated by the owner.
- 5.3.4 Fitment of Proximity switches to such equipment may reduce the likelihood or severity of such injuries.
- 5.3.5 Ensure fishers are given enough rest to ensure health and safety.

The Authority has found that the lack carrying out risk assessments at workstations and work to be performed is a common thread in most of the casualties investigated by the Authority. The IMO defines risk as “**a combination of the frequency and the severity of the consequence**”, thereby articulates two components of the likelihood of occurrence and the probability of severity of the (UN) predictable consequences.

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