Safety measures for unloading catch from fishing vessels to reception facilities at fishmeal and fish oil companies ashore

Background

The Norwegian Maritime Authority (NMA) has been notified of accidents and near-misses related to unloading of catch from fishing vessels to fishmeal and fish oil companies ashore.

The incidents have taken place in connection with entering the tank and the use of pumping equipment for return water, and involve fishermen who work on the vessel. The NMA does not have an overview of any accidents involving employees of onshore companies with regard to these operations. Our supervisory responsibility is limited to the shipping company, the vessel and the persons working on board.

The NMA has also been made aware of the fact that unloading operations involving the use of the land-based work equipment have been carried out by fishermen who have not received the necessary training in operating the equipment used. This has lead to dangerous situations.

Hazardous unloading operations

The unloading operation involves bringing the fish ashore, either by self-unloading using the vessel's vacuum pump system or by unloading using an unloading pump ashore which is lowered down to the cargo hold by means of a crane. During pumping, the hoses may have uncontrolled movements and thus be a risk to personnel handling the equipment. When entering the cargo tank, any gas produced in the cargo present a risk of insufficient oxygen in the tank. The use of crane and the risk of falling objects under hanging cargo also constitute a hazard during such operations. When entering the vessel and cargo tank there is also a risk of falling into the tank.

Risk assessment and training required

Hazardous work operations shall never be carried out if a risk assessment has not been completed with a description of hazards and preventive measures. Personnel involved must be given adequate training in the use of the relevant work equipment as well as an introduction to protection measures that are relevant for the work operation. When using work equipment that may pose a particular risk to life and health, written work
instructions must be prepared. Personnel must be trained to use the protective equipment if the work operation requires it.

**Responsibilities of the onshore company**

The most common practice is that the onshore company, as the buyer of the goods, is responsible for the unloading operation and has disposal of the unloading equipment and personnel. Thus, the onshore company is also responsible for the safety in accordance with the legislation of the Norwegian Labour Inspection Authority. If the onshore company chooses to involve fishermen who are employed on the vessel, they must include the shipping company and the relevant fishermen in the safety-related work. This means that the onshore company must ensure that the relevant fishermen are trained and able to operate the specific work equipment in a safe manner. In such cases, the onshore company must also ensure that the fishermen are included in a joint risk assessment of the unloading operation to make sure they are familiar with hazards and relevant protection measures. However, according to the Ship Safety and Security Act, the shipping company is still responsible for the fishermen working on board.

**Responsibilities of the shipping company**

In cases where it is decided that unloading operations shall be performed by using the shipborne equipment, the shipping company is responsible for the safety in accordance with NMA's legislation. If the shipping company chooses to involve onshore employees in the work operation, the shipping company is responsible of including the onshore company and the relevant safety work and make sure they are trained to use the specific work equipment on board in a safe manner. The shipping company must make sure to involve the onshore employees in a joint risk assessment of the unloading operation, to make sure they are familiar with hazards related to the actual unloading operation and hazards related to movement on board the vessel as well as other relevant protection measures. The onshore company is still responsible for the employees on shore pursuant to the Norwegian Working Environment Act.

**The role of the safety representative**

The vessel's safety representative shall ensure that the work on board is carried out in a safe manner and may, if necessary, propose new protection measures. The safety representative should participate in the development of procedures and job specifications related to hazardous work operations, participate in risk assessments and verify that the necessary preventive measures are implemented.

**The right to stop hazardous work**

If, in the opinion of the vessel's safety representative, a work operation may cause immediate hazard to life and health and the hazard cannot be averted in any other way, the safety representative shall stop the work temporarily and notify the master. The safety representative is not the only one with the option to stop hazardous work. If work, in the opinion of an employee on board, cannot continue without a risk to life and health, the work must be stopped and the master notified.
Special hazards and measures

Some of the most prominent elements of risk when unloading fish cargo to fishmeal and fish oil companies ashore are listed below along with suggestions for relevant protection measures. The list is not exhaustive and for information only.

<table>
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<tr>
<th>Special hazards</th>
<th>Appropriate safety measures (not exhaustive)</th>
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<tr>
<td>Risk of gas generation and oxygen deficiency when entering a cargo tank</td>
<td>Instructions for entering the tank shall be provided and studied before commencing work. The tank must be sufficiently aired and vented, and the gas metering must be completed before entering. Personal gas meter and communication equipment for personnel entering the tank. A person on watch must be placed by the tank manhole, provided with communication equipment. Fresh air equipment and other life-saving appliances must be readily accessible. No person shall enter the tank without being properly trained in relevant safety routines and use of equipment. Make sure to mark all areas at risk of gas accumulation with warning signs.</td>
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<td>Hoses used for pumping and unloading purposes may have uncontrolled movements and thus constitute a risk to personnel handling the equipment</td>
<td>Training in operation of the equipment, additional securing arrangements, i.e. slings on hose connections, establishment of safe zones.</td>
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<td>Cargo hatches, fall risks, crush injuries</td>
<td>Cargo hatches on board the vessel must be secured to maintain the safety of personnel moving around on board.</td>
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<td>Fall risk in cargo space</td>
<td>Fall prevention equipment must be used by trained personnel when there is a risk of falling to a lower level.</td>
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<td>Risk of falling objects under hanging cargo</td>
<td>Frequent crane maintenance intervals must be implemented and safety zones must be set up under hanging cargo.</td>
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<tr>
<td>Use of land-based crane when unloading</td>
<td>A land-based crane cannot be operated by personnel on the vessel unless the operator is certified in accordance with the relevant legislation from the Norwegian Labour Inspection Authority.</td>
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References to relevant legislation:
Norwegian Act relating to ship safety and security, Regulations of 1 January 2005 No. 8 on the working environment, safety and health, etc., Regulations of 22 November 2013 No. 1404 on fishing vessels of less than 15 metres overall length, Regulations of 13 June 2000 No. 660 on the construction, operation, equipment and surveys of fishing vessels of 15 m in overall length (LOA) or upwards.
IMO Resolution A.1050(27)