SUMMARY

The vessel OSLO WAVE was in Bollstabruk loading wood products in form of packaged timber. The ship was moored to a large barge equipped with a knuckle boom crane used to load the ship together with one of the ship's own cranes. Two stevedores worked together in the ship's cargo hold, directing the loading and uncoupling of the sling. No other member of the stevedoring team was on board to act as signalman or hatch boss to supervise and control the loading operation from the ship's deck. The ship's crane had difficulties reaching certain zones of the cargo hold, resulting in that the crane arm operated close to its lower limit. During the cargo handling, the perception of the crane operator operating the ship's crane was that the crane arm could be operated in an unusually low position. When cargo handling had been ongoing for around a day and a half the cable that lowers the crane arm released from the winch drum, and the crane arm fell into the cargo hold and landed about half a meter from the stevedores. No physical injuries were sustained by individuals.

The collapse of the crane arm was caused by the fact that it was possible to lower the arm to a point which was too low for cargo handling; such that there was insufficient cable remaining on the winch drum to hold the combined weight of the crane arm and cargo load. The reason it was possible for the crane arm to be lowered to this low point was that the low limit switches had been bypassed by means of an extra switch installed in the crane's control cabinet. A contributory factor was that the self-inspections on board the ship were not carried out in such a way that the extra switch was discovered. The crew were thereby not aware of the inadequate functioning of the crane's safety features. Another contributory factor was that the operator of the ship's crane did not perform a full operational check of the crane before operation.

SHK also notes that there were inadequate procedures at the port relating to cargo handling and that certain work procedures were not documented. It has also been noted that there was a lack of coordination in the harbour between the actors involved in the loading of the ship.

Safety recommendations

The safety issues which SHK has identified in this investigation are primarily the lack of documented and implemented procedures for loading and unloading of ships. It has also been established that a safety-critical function in the crane has been bypassed, which was not discovered prior to use.

SHK deems the measures taken (see section 3) to be appropriate.

When it comes to the shipping company, has it during the investigation emerged indications that the self-inspection system does not work in such a manner that deviations are sure to be detected. Even if the measures taken by the shipping company today should lead to a malfunction identified before a crane is used, it also need to be taken measures to ensure that all checks performed in accordance with the ship's SMS are done complete and in correctly manner.

Bulkship Management AS is therefore recommended:

- Take action to ensure that the checks to be carried out in accordance with the ship's SMS are sufficiently thorough to enable the identification of deviations before safety-critical work activities begin. (*RS 2016:04 R1*)