

Use of mobile work equipment during cargo-handling operations

Mobile work equipment, such as compact loaders, trucks and lifts, may present a hazard when used in cargo-handling operations.

Background

The Norwegian Safety Investigation Authority (NSIA) has released a report following the accident on board the *Mercator* on 12 November 2018, where an able seafarer died after being crushed between the shovel and wheelhouse of a compact loader. The NSIA report shows that the safety functions of the compact loader were disconnected, and that a risk assessment had not been carried out for the work with the compact loader. Also, procedures had not been prepared for the safe operation or maintenance and control of the machine. The report included a safety recommendation addressed to the Norwegian Maritime Authority (NMA) concerning the legislation on requirements for the use, maintenance and control of mobile work equipment on board vessels.

The NMA receives reports on a regular basis following serious incidents related to the use of mobile work equipment on board. Mobile work equipment may be part of the vessel's equipment, but it can also be equipment brought on board during cargo-handling operations, and it is often operated by the ship's crew.

Cause:

Unwanted incidents are often caused by a lack of training, procedures and risk assessments before the equipment is used.

Some of the other causes we have observed in the use of mobile work equipment are insufficient overview of the functions of the equipment, potential hazards when using the equipment, poor technical condition, inadequate safety features and incorrect use.

Moreover, rush and stress during cargo-handling operations may increase the risk during such operations.



Current requirements

In accordance with section 7 of the Ship Safety and Security Act, companies have a duty to identify potential risks on board and to act when a risk is identified. This is included in the company's safety management system

The NMA would like to emphasise that all mobile equipment brought on board must be **risk assessed with regard to health, safety and the environment**. The [Regulations of 1 January 2005 No. 8 on the working environment, safety and health of workers on board ships](#) section 2-2 first paragraph sets out a general requirement for risk assessment related to work equipment and new technology.

This means that

- **hazards on board shall be identified;**
- **an assessment of the risk presented by the hazard shall be made; and**
- **relevant safety measures shall be taken.**

It is important to look to chapter 4 on work equipment in the Regulations on the working environment, safety and health of workers on board ships when such equipment is brought on board.

No certificate or formal education is required to operate work equipment on board vessels. It is, however, a requirement that that persons working on board must receive the necessary information on safe operation and training in the operation of work equipment, including mobile equipment.

The ship's safety management system should have procedures for equipment training, and if these procedures are not in place, they must be made for equipment brought on board.

Completed training shall be documented in writing. Training shall be repeated regularly, and in the case of a modified or new risk.

If the company does not have the competence, they should assess the need for external assistance. Work must be carried out to identify applicable requirements and required competence.

Regular inspection and maintenance of all work equipment is also required. Work equipment which may involve special risk of injury to life and health shall be subject to written job instructions and the necessary measures.

Corrective measures

- Risk assessments of hazards on board are required. These assessments must include issues and risks related to mobile work equipment.
- Good routines must be in place for mobile work equipment training.
- Furthermore, the technical condition of the equipment must be evaluated. Faulty equipment must not be used, and repairs must be carried out according to the requirements for the equipment and the manufacturer's specifications.
- The various safety functions/barriers for mobile equipment must be known.
- Mobile work equipment must be fitted in such a way that it does not pose a risk to employees operating or staying close to the work equipment.
- Mobile work equipment must be sufficiently secured when not in use.

References:

- Act of 16 February 2007 No. 9 relating to ship safety and security (Ship Safety and Security Act)
- Regulations of 1 January 2015 No. 1191 on a safety management system for Norwegian ships and mobile offshore units
- Regulations of 16 December 2016 No. 1770 on safety management for small cargo ships, passenger ships and fishing vessels, etc.
- Regulations of 1 January 2005 No. 8 on the working environment, health and safety of workers on board ship (HSE Regulations)
- Regulations of 15 June 1987 No. 507 on safety measures, etc. on passenger ships, cargo ships and barges
- [Report on the marine accident with Mercator LAYL7/7047356 - occupational accident at Drammen port 12 November 2018](#)

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