



# Fatal accidents caused by moving elevators on ships

## Purpose

This marine notice highlights shipowners, operators, masters and crews obligation to ensure safe working arrangements are in place for any work involving a ship's elevator.

## Background

During 2018 and 2019, AMSA received notification of two separate accidents that involved crew members being trapped and crushed by a moving elevator. In both instances, the elevator moved while the crew members were working between the elevator casing and the cage, resulting in fatal crush injuries.

Incidents resulting in crush injuries caused by an elevator are not new, with a similar fatality investigated by the Australian Transport Safety Bureau (ATSB) in 2007. In this instance, a crew member was crushed in the elevator while conducting repairs. Elevator related fatalities have also been reported on multiple ships in other parts of the world.

AMSA believes that such incidents are avoidable through the application of simple and effective risk controls.

## Systemic failures related to fatal crushes in elevators on ships

Similar systematic failures have been identified in all of these fatal accidents. The following were considered to be some of the key safety issues:

- Elevator instruction manuals lacked unambiguous and useable safety guidance.
- No proper risk assessments were in place for elevator maintenance as part of the safety management system.
- Risk assessments that did exist were not effectively implemented.

- Crew were not aware of—or did not consider—all of the hazards associated with working in the elevator. An example of this is the counterweights that moved down as the lift cage moved up, causing harm.
- Untrained personnel were used to carry out maintenance and repairs on the ship's elevators.
- No appropriate safeguards were in place—such as isolation lock-out—to ensure that the elevator cage did not inadvertently move while the crew were working in the elevator shaft.

## Expectation

An elevator shaft is a very hazardous environment in which to work. The potential dangers involve:

- height risk
- injury by falling object(s)
- noise
- electrocution from live electrical circuits
- unanticipated movement of the elevator cage.

AMSA cannot stress enough the importance of conducting a proper risk assessment and implementing relevant procedures, which are applied in practice to ensure the safety of crew working on a ship's elevator.

AMSA also recommends planning for elevator maintenance or deferring elevator maintenance work until the vessel is in port and utilising a trained manufacturer's technician.

## Effective risk assessment

AMSA's [Maritime Safety Awareness Bulletin Issue 6](#) provides guidance on tools and methods that can be adopted to support risk identification and the implementation of risk controls.

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