

Service lifts in offshore and onshore wind turbines

Health and Safety Executive - Safety notice

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Target audience: Duty holders who design, manufacture, construct or operate wind turbines, duty holders who maintain, service or undertake statutory testing on wind turbines and their employers, suppliers and manufacturers of service lifts for wind turbines.

Issue

A wind turbine service technician suffered serious injuries when his hand was trapped between fixed and moving parts of a service lift. The worker was able to place his hand into an aperture whilst sending the service lift down using the 'one touch to operate' external controls.

The external controls were positioned on the moving parts, and the design of the landing gates and associated guarding did not prevent him reaching the moving lift car which crushed his hand against the gate.

Outline of the problem

Design of the base and the upper-level landing gates and associated guarding of a service lift in a wind turbine did not prevent access to the moving lift car. It was possible to reach the moving lift car and become crushed or sheared by it against the rigid portions of the gate.

In addition, failure to follow the established standard for reach distances (BS EN ISO 13857) meant that the external controls were not situated in a position of sufficient distance from the danger zone.

Standards for safe service lifts

An absence of defined industry standards for the safe design of service lifts within wind turbines has resulted in discrepancies in the application of required safeguards by designers and manufacturers. This is a potential risk to users. Hazards from the design, guarding, and positioning of controls should be identified and addressed by manufacturers or suppliers.

A new standard, 'BS EN 81-44 - Safety rules for the construction and installation of lifts. Special lifts for the transport of persons and goods. Part 44. Lifting appliances in wind turbines' is due to be published. This standard sets the benchmark for the safe design of service lifts and associated safeguards.

The Provision and Use of Work Equipment Regulations 1998, Regulation 11(1)

requires employers to ensure that measures are taken to prevent access to dangerous parts of machinery.

Action required

Operators

Duty holders who operate wind turbines, and employers of persons who operate or undertake maintenance activities on such wind turbines, should immediately check the design of gates, associated guarding, and the position of the external controls of lifts in use.

If existing guarding or the position of the external controls is inadequate, you should reposition controls and/or install sufficient guarding. You should either withdraw lifts from use or implement short term suitable control measures to mitigate risks until this work is complete.

Control measures can allow short-term continued use of the lift until the repositioning of the external controls and/or the installation of additional guarding can be completed.

Manufacturers and suppliers

You should help duty holders who operate lifts, or employers of users of lifts, that you have supplied to eliminate these hazards.

You must ensure that all lifts supplied to the UK satisfy the essential health and safety requirements as required by the Supply of Machinery (Safety) Regulations 2008.

When the new standard, BS EN 81-44, is published it should be referred to when undertaking the conformity assessment process.

Guidance

- [Provision and Use of Work Equipment Regulations 1998 \(PUWER\)](#)
- [ISO 13857:2019 Safety of machinery: Safety distances to prevent hazard zones being reached by upper and lower limbs](#)
- [BS EN 81-44 - Safety rules for the construction and installation of lifts. Special lifts for the transport of persons and goods. Part 44. Lifting appliances in wind turbines](#)

Relevant legal documents

- [Provision and Use of Work Equipment Regulations 1998 \(PUWER\)](#)
- [Supply of Machinery \(Safety\) Regulations](#)
- [The Management of Health and Safety at Work Regulations 1999](#)
- [The Supply of Machinery \(Safety\) Regulations 2008](#)