

Escalator and travelator void in-fills

This Alert warns persons with management or control of workplaces, employers, and designers of buildings and structures, of the dangers associated with in-fill areas around escalators and travelators.

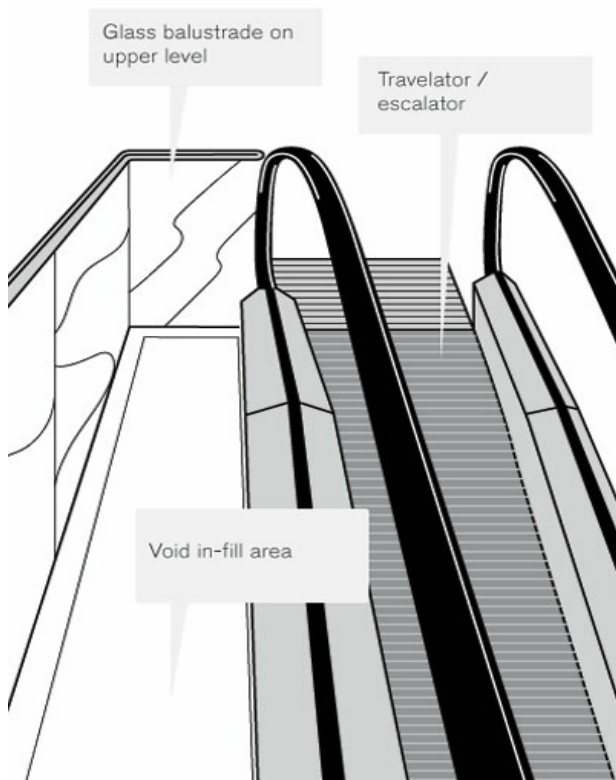
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Background

Escalators and travelators (also referred to as moving walkways) designed to carry passengers from one level to another are common in many workplaces (eg shopping centres, sporting centres). Usually, the top of an escalator or travelator passes through a hole or void in the upper floor to reach the lower level landing. In many cases, when the escalators or travelators are installed in the building, they do not completely occupy the void in the upper floor. Handrails and balustrades are usually fitted around the void to prevent access from the upper level by persons to control the risk of a fall. The remainder of the void located between the handrails around the void and the handrail / balustrade of the escalator or travelator is either left open or is filled in with material (in-fill area). This in-fill material may not have been designed and constructed to support access by people.

There may be instances where employees and contractors might access this in-fill area for cleaning or maintenance, such as painting and / or hanging of posters. Members of the public may also attempt to access this area to retrieve dropped items. Employees and others may be placed at risk of falling through the in-fill material should they access this area.

In a recent incident, a contractor fell more than five metres to the lower level and sustained a fractured hip, two fractured ribs and a fractured wrist as a result of stepping on an in-fill area while cleaning the balustrade. The in-fill was made of plasterboard that was not load-rated.



In-fill area made of plasterboard, which is not safe to stand on

Recommended risk control measures

Persons with management or control of workplaces such as shopping centres and sporting centres (eg centre management) must ensure, so far as reasonably practicable, that the workplace is safe and without risks to health. If it is determined that the in-fill area cannot support the people, material or any other loads that may be applied to it, persons with management or control should ensure:

- the in-fill material is removed so the user can clearly see and identify the fall hazard, or
- strengthening works are undertaken to the in-fill area so it can support the people, material or any other loads that may be applied to it (eg modify or reinforce the existing structure using a design by a competent person eg a structural engineer).

Anti-slide, access restriction and anti-climbing devices should also be in place and regularly inspected and maintained to prevent access to both the in-fill area and the sides or between escalators or travelators.

Interim controls may include:

- installing warning signs to inform persons not to access the area
- instructing employers, employees and contractors to use cleaning/maintenance equipment that can be used from a location other than the in-fill area eg using long handled equipment.

Note: Interim control measures are intended as a temporary measure as they still carry risk, and should be replaced with more permanent control measures as soon as possible.

If it isn't known what loads the in-fill material has been designed for and whether it can support people, material and any other loads that may be applied to it, a risk assessment – including a load rating assessment - should be undertaken to ensure that appropriate in-fill material is used for the type of access that may occur.

Employers (eg cleaning and maintenance service employers) must ensure that if an employee or contractor is required to undertake a task at the workplace that involves a risk of a fall greater than two metres, the risk is controlled, so far as is reasonably practicable, using prescribed risk control measures.

Designers of building and structures (eg designers of shopping centres) who know or ought reasonably to know, that the building or structure will be used as a workplace, also must ensure, so far as is reasonably practicable, that the building or structure is designed to be safe and without risks to health, for persons using it as a workplace.

Further information

- AS/NZS 1170 – *Structural design actions – Part 1: Permanent, imposed or other actions*
- AS 1657 – *Fixed platforms, walkways, stairways and ladders – Design, construction and installation*
- AS 1735.5 – *Lifts, escalators and moving walks – Escalators and moving walks*

Contact Details

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