



# Safety standards for Escalators and moving walkways

## Introduction

In 2010 WorkSafe conducted an inspection campaign on escalators and moving walk ways aimed at improving safety and health issues. The following newsletter was developed to identify safety issues in the industry and to assist you in meeting the requirements of the OSH legislation.

The checklists used by WorkSafe inspectors during this campaign are included in this newsletter. Please use the checklists to ensure your workplace meets the occupation safety and health legislation.

## What issues are included in the checklists?

- Ensuring each escalator and moving walk has been design registered;
- Ensuring each escalator and moving walk has been individually registered;
- That maintenance and inspections programs are in use;
- The general condition of the escalators and moving walks;
- Records are being kept and maintained of maintenance, inspection and testing; and
- Safety signage is fixed and correct.

## Regular OSH updates

Do you want receive regular emails from WorkSafe to keep you up to date with changes to occupational safety and health in Western Australia, then go to [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au) →services→ mailing lists

## Frequently asked questions

### How can I show that I have maintained the escalator/walkway properly?

You are required under the *Occupational Safety and Health Regulations 1996* to keep records of maintenance, inspection, commissioning or testing of plant and of any alteration to that plant. Keeping of good records is a very effective way of demonstrating that you have complied with your duties under the Act in terms of maintaining a workplace free of hazards.

### How do I obtain a copy of inspection and maintenance documentation?

Contact the contractor responsible for maintaining the plant to supply you with a copy

### Does the manufacturer/supplier have to provide me with the documentation?

The person who supplied you the plant (whether it is a commercial or private sale) has a duty under the *Occupational Safety and Health Regulations 1996* to provide you, (the person receiving the plant) with all available information required to enable the plant to be used safely and, where available, with any records kept by a previous owner of the plant and records of an ongoing maintenance and inspections.

## ThinkSafe Small Business Assistance Program

If you are a small business owner or manager (employing less than 20 full-time employees) and want to make your workplace safe, the ThinkSafe Small Business Assistance Program can help you. The ThinkSafe Small business Assistance Program offers an occupational safety and health audit of your business which is:

- free (up to three hours assistance);
- easy to obtain;
- provided by an independent and qualified OSH consultant; and
- is a simple process with clear and immediate benefits to your business.

To apply download and complete the online form from [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au) or telephone 1800 429 273

# Machine SAFETY

## Machine guarding

Employers, manufacturers, designers and suppliers of machinery and equipment are legally required to make sure dangerous parts are safely guarded so that operators and others are protected from injury.

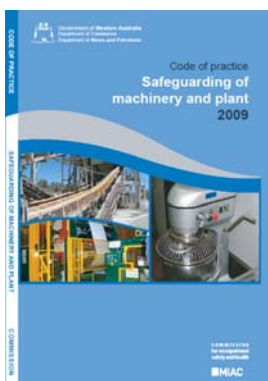
A guard may be any shield, cover, casing, physical or electronic barrier intended to prevent contact between a hazardous machine part and any part of a person or a person's clothing.

### Control the risk

Old machinery is sometimes poorly guarded. Hazard areas may include extra moving parts like shafts, sprockets and pulleys that have been added for other uses. Original guarding may have also been removed for maintenance and not put back. There may be times when an operator may need to reach over, under, around or into a machine while it is running. If so, any moving parts or other hazards must be appropriately guarded from human contact.

Some of the hazards associated with machinery and likely to cause injury include:

- Gearing, including friction roller mechanisms, cables, sprockets, chains, clutches, cams or fan blades.
- Keyways, keys, grease nipples, set-screws, bolts or any other projections on rotating parts.
- Any pulley or flywheel that incorporates openings, spokes or protrusions, etc, that renders it anything except totally smooth.
- Any crushing or shearing points, such as augers, roller feeds, and conveyor belts.
- Strip guarding which is properly secured.
- Rotating knives, blades, tines or similar parts of power driven machines that operate in or near the ground.
- Any machine component that cuts, grinds, pulps, crushes, breaks or pulverises.
- Hot parts of any machine.
- Machinery being accidentally started during maintenance. (for more information see guidance note Isolation of plant.)



The Commission for Occupational Safety and Health has released a code of practice for safeguarding of machinery. This publication is available on the WorkSafe's website [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au)

## Lock-out and tagging

Locking out of equipment or machinery is the most effective way of preventing it becoming operational during maintenance. Its effectiveness lies in the "one key per lock, one lock per person" procedure.

If there is only one key per lock, the key has to be with the person carrying out the maintenance. Where more than one person is working on equipment or machinery a multi-lock system should be followed, ensuring that each person has attached a "personal" lock to the equipment or machine's multi-lock switch.

All workplaces must have a system unless the equipment or machinery is fully inoperative and then disconnected from the energy source.

Essentially, there are two types of tag, the "DANGER" tag and the "OUT OF SERVICE" tag.

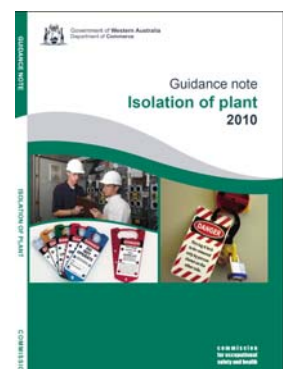
Australian Standard 1318 - 1985 recommends specific colours for the marking of physical hazards and the identification of certain equipment in industry. Colours used are red, yellow, green and blue.

- **RED AND WHITE:** Signifies danger and prohibition, fire protection equipment, stop buttons for electrical switches and emergency stop controls for machinery.
- **YELLOW AND BLACK:** Signifies caution: draws attention to such hazards as unfastened or removed machinery guards.
- **GREEN AND WHITE:** Denotes safety and location of safety or first aid equipment.
- **BLUE AND WHITE:** Is for information signs where there is no specific hazard.

Are isolating switches provided, and are lock-out and tagging procedures used during maintenance work on machinery such that:

- isolation switches are switched off?
- switches are locked out and tagged to inform others that maintenance work is being done?
- the only key to the lock is in the possession of the person carrying out the maintenance?

The Commission for Occupational Safety and Health has recently released a guidance note: Isolation of plant. This publication is available on the WorkSafe's website [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au)



# Checklists

## escalator/moving walk details

If more than one Escalator/Moving Walk then they shall be conspicuously numbered both on the circuit breaker and on the starting station at each end. In addition the Statutory Authority Registration Number shall be conspicuously displayed on or adjacent to the circuit breaker.

## Design registration

check	yes	no	Comments
Has the Escalator/Moving Walk got a registered design number? (This number can be found on the Registration Certificate under the individual registration number)			
Is the Escalator/Moving Walk individually registered? (This can be found top right corner of the registration certificate)			

## Individual registration

check	yes	no	Comments
Is the registration number permanently marked on the plant? i.e. Circuit Breaker etc			
Is the owner on the registration certificate the same as the current owner?			

## Maintenance and inspection paperwork

check	yes	no	Comments
Is the Escalator/Moving Walk maintained and inspected in accordance with written instructions developed at the time of the design by the person who designed or manufactured the escalator?			
And/or is the Escalator/Moving Walk maintained and inspected in accordance with Australian Standards			
Are the inspections, maintenance records readily accessible by workers or OHS Reps?			



## safety checklist

check	yes	no	Comments
Is there at least 2 metre access and exit clearance from the end of the handrail?			
Are the Entry and Exit points sufficiently illuminated?			
Are the Warning stickers clearly legible and characters in English?			
Is the Escalator/Moving Walk Stop Switch clearly labelled and red in colour?			
Is the Escalator/Moving Walk Handrail moving at the same speed as the steps?			
Test Handrail - whilst travelling on the Escalator/Moving Walk pull on the handrail to see if it slides back, should not slide back.			
Is the Escalator/Moving Walk Handrail in good condition? ie. no sharp edges or other hazards where fingers can get caught or pinched.			
Is the clear height above steps/belt to head high hazards at least 2.3 metres?			
Is the step tread clean and flat? i.e. no sharp or knife edges Min Width 2.5mm			
Are all the combs in place? Max. 1 tooth missing in any one comb. Min comb teeth width 2.5mm.			
Are the combs at least 6 mm deep meshing into step/belt guides?			
Are there any signs of step misalignment – scraping marks on the sides of the guarding?			
Is the step clearance excessive between side of step and guarding? 4mm one side max gap. Total both sides 7mm max gap (pen width approx 5mm)			
Does all the guarding have its locating screws/rivets in place?			
Are there any hazards due to displays, pot plants, located too close to handrails? Minimum 80mm to closest obstacle from handrail.			

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