

Burns Industrial Equipment Inc
Fall Protection Safety
Program and Training
Materials

Effective Date:
Revision #:



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Prepared by:

Date:

Approved by:

Date:

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Fall Protection Safety Program

Effective Date: November 1, 2015
Revision #:1



REFERENCE STANDARD

This procedure is developed in accordance with provisions as outlined in the OSHA safety standards for General Industry (Part 1910), Subpart D: Walking and Working Surfaces, specifically 29 CFR 1910.21 – Definitions; 29 CFR 1910.22 – General Requirements; 29 CFR 1910.23 – Guarding Floor & Wall Openings and Holes; and 29 CFR 1910.24 – Fixed Industrial Stairs.

PURPOSE

This policy establishes how Burns Industrial Equipment Inc will enhance safe working conditions at this facility through the establishment of specific walking and working surface requirements and protection from fall hazards.

SCOPE

This policy applies to all Burns Industrial Equipment Inc employees and all company contractors, visitors or vendors.

RESPONSIBILITIES

Senior management will:

- Require the full application and integration of this policy into daily operations, as applicable, in all areas of responsibility and with all direct reports;
- Assess managers and supervisors on their ability to apply this policy in their areas of responsibility; and
- Provide fall protection to affected employees.

The Safety Administrator will administer all aspects of this policy to include:

- Maintaining and updating the written program as required;
- Coordinating necessary training for all affected employees;
- Providing necessary technical assistance to managers and supervisors; and
- Periodically assessing the effectiveness of this program and its implementation in all affected areas of the company.

Managers and supervisors will:

- Know how this policy applies to those under their direct control;
- Integrate and enforce the provisions of this policy in their areas of responsibility;
- A qualified manager or supervisor will develop a site specific plan if fall protection is required;
- Periodically audit the effectiveness of this policy in their areas of responsibility;
- Coordinate training for all affected employees;
- Provide appropriate coaching and corrective action when necessary to ensure this policy is fully integrated; and
- Investigate and document all incidents that result in employee injury.

All affected employees will:

- Integrate the provisions of this policy into their daily activities as applicable;
- Follow all training, instructions and directives relative to this policy;
- Seek clarification whenever there are questions concerning the application of this policy into daily operations;
- Bring to management’s attention any unsafe or hazardous conditions or practices that may cause injury to themselves or other employees; and
- Report any incident that causes injury to an employee, regardless of its nature.

POLICY EVALUATIONS AND UPDATES

It is our goal to maintain a safety program that is understandable, effective and one that promotes a safe work environment. Any employee can make recommendations for improvement to this program or any other aspect of our safety system. These suggestions should be directed to any member of management, any safety committee member or to the safety administrator.

As a matter of policy, this program will be reviewed on an annual basis by the safety administrator to determine if all aspects still meet the needs of this organization. If there are significant events that take place during the year that indicate the program is less than effective, an immediate evaluation will be conducted and appropriate steps taken to increase the reliability of this plan.

Date of Review	Name of Reviewer	Changes Required Yes or No	Current Revision Number

DEFINITIONS

The following definitions help to clarify words or phrases found in this policy:

Affected employee: Any employee or contractor that is required to work at a height.

Authorized employee: Any employee or contractor that by the nature of their job is required to perform work at heights of four feet (4 ft.) or more than the next lower level.

Platform: A working space where people can stand to perform work that is elevated above the surrounding ground, floor, machinery or other type of landing.

Standard railing: A standard railing consists of top rail, a mid rail and support posts. The top rail height must be 42 inches from the working surface and the mid rail must be halfway between the top rail and the floor, platform, runway or ramp.

Standard toe board: A vertical barrier at floor level, erected along exposed edges of a floor

or wall opening, platform/landing or ramp to prevent objects from falling over the edge. A standard toe board must be four inches in height from its top edge to the working surface. It must be securely fastened and not have more than ¼ inch gap from the base of the toe board to the working surface. It may be made of any substantial material either solid or with openings not over 1 inch in greatest dimension.

FALL HAZARD SURVEY

Prior to implementing fall protection procedures, authorized facility personnel will conduct a fall hazard survey to identify all real or potential fall hazards. Appendix A is the fall hazard survey form that will be completed to evaluate real or potential hazards.

When conducting the fall hazard survey, the person or persons conducting the survey must be familiar with fall hazard definitions and the work environment. When conducting the survey, consideration must also be given for specialized maintenance functions such as cranes, tops of machines and roof work.

The fall hazard survey will identify one or more methods to eliminate or control each identified hazard and will identify the responsible person(s) and completion date(s) for protective measures to be resolved.

Fall hazard survey reports must be revised or re-written whenever there is a change to the task, process, structure or equipment that would render past surveys obsolete.

TRAINING

All employees will receive some level of training relative to fall protection. All employees will receive awareness-level training, which is designed to convey the concept of elevated platforms and performing work at elevated heights.

Any employee who has the requirement to perform work at heights as a part of their job will have practitioner-level training that describes the steps that have been taken to provide fall protection measures and when additional measures must be employed. Specifically, this training will include:

- Recognition of fall hazards;
- Methods to eliminate or control fall hazards; and
- Specific requirements as outlined in various standards.

The training frequency will be as follows:

- *Awareness-Level Training*: Provided to employees who do not have job responsibilities that involve working at elevated heights. Training will be provided within the first week of employment or re-assignment into a new area. Refresher training will be provided when conditions in the workplace warrant new training; and
- *Practitioner-Level Training*: Provided to employees who have job responsibilities that will require them to work on or at elevated heights. Training must be provided before the employee is required to perform any job that will have them working at an elevated height. Practitioner-level training will be provided on an annual basis or whenever conditions in the work environment warrant more frequent training (such as when new equipment with new working platforms is delivered to the facility.)

Elements of the training will include:

- Nature of fall hazards to which employees may be exposed;
- Correct procedures for erecting, maintaining, disassembling and inspecting fall

- protection systems;
- Use and operation of controlled access zones, guardrails, personal fall arrest systems, safety nets, warning lines and safety monitoring systems;
- Role of each employee in the safety monitoring system (if one is used);
- Limitations of the use of mechanical equipment during roofing work on low-slope roofs;
- Correct procedures for equipment and materials handling as well as storage and erection of overhead protection;
- Requirements of the OSHA Fall Protection Standard, 29 CFR 1926, Subpart M; and
- Requirements for reporting incidents that cause injury to an employee.

WALKING-WORKING SURFACES – General Requirements

The following requirements will apply to all walking and/or working areas in the facility. The responsible manager for each area shall periodically survey their areas of responsibility to ensure these requirements are being met. When necessary, adjustments to physical conditions shall be made to meet these requirements.

Housekeeping: Passageways, storerooms and service rooms will be kept clean, orderly and in a sanitary condition. In all areas of the facility, workroom floors must be maintained in a clean, and as much as possible, dry condition. Where wet conditions exist, management will install proper drainage or, when drainage is impossible, mats should be used to keep workers' feet on a dry surface.

Aisles and Passageways: All aisles and passageways will have sufficient safe clearances when material handling equipment is in operation. Consideration shall be given to the type of work performed in all areas so there is no competition between people and moving equipment. At a minimum, aisles and passageways must be at least 22 inches wide. Sufficient space for people must always be maintained in aisles and passageways.

All aisles and passageways will be kept clear of obstructions and maintained in good repair, and all permanent aisles will be marked either with tape or with paint.

Floor Loading Protection: Load rating plaques will be conspicuously posted in appropriate locations throughout the facility. At no time will load limits be exceeded in any location. This is particularly true when equipment is stored on top of mezzanine areas, office areas or other single-storied areas.

FLOOR OR WALL OPENINGS

Stairway Openings: Standard railings will be provided on all exposed sides except at the stairway entrance.

Stairway Railings and Guards: Every flight of stairs having **four** or more risers (steps) will be equipped with a standard stair railing as described below:

- On stairways less than 44 inches wide with both sides enclosed, at least one handrail on the right side descending;
- On stairways less than 44 inches wide having one side open, at least one stair railing on the open side;
- On stairways less than 44 inches wide but with both sides open, one stair railing on each side;
- On stairways more than 44 inches wide but less than 88 inches wide, one handrail on each enclosed side, one stair railing on each open side; and
- On stairways 88 inches or more wide, one handrail on each enclosed side, one stair railing on each open side and one intermediate stair railing located approximately midway of the width.

Stairway Railing and Handrail Specifications: The following provides guidance on how all railings and handrails will be constructed. When purchasing equipment, these requirements must be followed:

- A stair railing system must be of similar construction to a guardrail system except that the vertical height may not be more than 34 inches or less than 30 inches from the upper surface of the top rail to the surface of the tread; and
- The height of the handrails may not be more than 34 inches nor less than 30 inches from upper surface of the handrail to surface of the tread, with a clearance of not less than 3 inches between the handrail and wall.

Fixed Industrial Stairs: All fixed industrial stairs, purchased or installed, must meet the following requirements:

- Fixed stairs will be provided for access from one level to another where operations necessitate normal travel between levels and for access to operating platforms for any equipment that requires routine attention;
- Fixed stairs must be capable of carrying a load five times the normal live load anticipated with a minimum ability to safely carry a moving, concentrated load of 1,000 pounds;
- Fixed stairs must have a minimum width of 22 inches;
- Fixed stairs will be installed at angles to the horizontal of 30 to 50 degrees. Any uniform combination of tread width and rise height shall be in accordance with the chart in Appendix B. When pre-fabricated stairs are ordered, these requirements must be specified. Note: Appendix B contains the same requirements as outlined in the OSHA standard for fixed industrial stairs (29 CFR 1910.24(e) Table D-1);
- All stair treads must be slip-resistant;
- Stairway platforms may be no less than the width of the stairway and a minimum of 30 inches in length, measured in the direction of travel;
- Standard railings must be provided on the open sides of all exposed stairways and platforms, and handrails must be provided on at least one side of closed stairways; and
- The vertical clearance above any stair tread to an overhead obstruction must be at least 7 feet, measured from the leading edge of the tread.

Floor Opening or Hole: Every floor opening or hole must be guarded by either a railing system with toe boards along all exposed sides or a load-bearing cover. When the cover is not in place, the roof, floor opening or hole must be protected by a removable guard railing.

Protection of Wall Openings/Holes: Every wall opening from which there is a drop of more than four feet will be guarded by a railing system. Where there is a potential of exposure to falling objects, a removable toe board will be provided.

NOTE: The next section on open-sided floors and platforms is very important because it addresses most fall protection issues.

Protection of Open-Sided Floors and Platforms: Every open-sided floor or platform (see definitions section for the definition of platform) four feet or more above the adjacent floor or ground level must be guarded by a standard railing and toe board (see definition section) on all open sides except where there is an entrance to a ramp, stairway or fixed ladder. The railing systems are required to have a toe board wherever a person can pass beneath the open sides or there is moving machinery.

NOTE: When a working platform is adjacent to dangerous equipment, there must be a standard railing and toe board regardless of the height difference.

FALL PROTECTION HIERARCHY

The following hierarchy, or preferred order of control, will be used to choose methods to eliminate or control fall hazards:

1. Eliminate the need to work at height;
2. Use of engineering controls such as guardrails and/or work platforms;
3. Use of personal positioning system to prevent a fall;
4. Use of a personal fall arrest system; and
5. Administrative controls.

Securing the work area. Overhead work shall not be performed when there are other people directly underneath the overhead work. If other people need to be in the immediate area, then steps must be taken to secure the work area and the safety of people working below overhead work. This may include the use of head protection (hard hats) or other guards to keep debris from falling on people below the overhead work. Whenever possible, work below overhead work will be suspended until the overhead work is complete.

A sign reading "workers overhead" shall be put in the area where workers are performing overhead work to warn people who may be passing through the work area. The area directly beneath the overhead work must be secured to prevent unauthorized people from entering the area.

Scissors lifts. When using a scissors lift, occupants will be protected from falling by restraint systems, fall arrest systems or guard rails. Fall restraint/arrest systems are not required where protection is afforded by guardrails and where the occupant does not step above the platform of the lift.

AUDITS AND INSPECTION

Appendix C contains a walking/working surface audit that will be completed on at least a monthly basis. All "NO" answers must be addressed when identified. On an annual basis, overhead working areas will be surveyed to ensure proper fall protection methods. The fall hazard survey (Appendix A) must be reviewed on an annual basis to ensure elements within the survey are current and accurate.

ENFORCEMENT

Constant awareness of and respect for fall hazards, as well as compliance with these and all other company safety rules, are considered conditions of employment at Burns Industrial Equipment Inc. The crew supervisor or foreman reserves the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines in this plan.

ACCIDENT INVESTIGATIONS

All incidents that result in injury to workers and near misses, regardless of their nature, must be reported and investigated. All incidents will be investigated as soon as possible to identify the cause and means of prevention of future occurrences.

In the event of an incident, this Fall Protection Plan will be reviewed to determine if additional provisions or practices, procedures or training should be implemented to prevent similar incidents in the future.

Important Things For You to Remember About...



Walking and Working Surfaces

- ✓ Regularly inspect all walking and working areas for slip, trip and fall hazards.
- ✓ Prioritize housekeeping, proper lighting, clear vision, safe stairways and cautious ladder use.
- ✓ If you notice a hazard, correct it immediately or notify a supervisor.
- ✓ Always wear proper PPE, including proper footwear.
- ✓ Report all injuries (major and minor) immediately so Burns Industrial Equipment Inc can find ways to

CAUSES OF INJURY

- ✓ Inadequate housekeeping
- ✓ Inadequate lighting
- ✓ Carrying objects that obstruct vision
- ✓ Walking too fast/running
- ✓ Distractions

WAYS TO PREVENT

- ✓ Be on the lookout for hazards
- ✓ Thoroughly inspect PPE prior to use
- ✓ Inspect equipment prior to use
- ✓ Do not misuse equipment

PERSONAL PROTECTIVE EQUIPMENT – I

TYPES OF FALLS

- ✓ Same level/elevated
- ✓ Slips
- ✓ Trips
- ✓ Step and fall
- ✓ Falls from equipment

APPROPRIATE FOOTWEAR

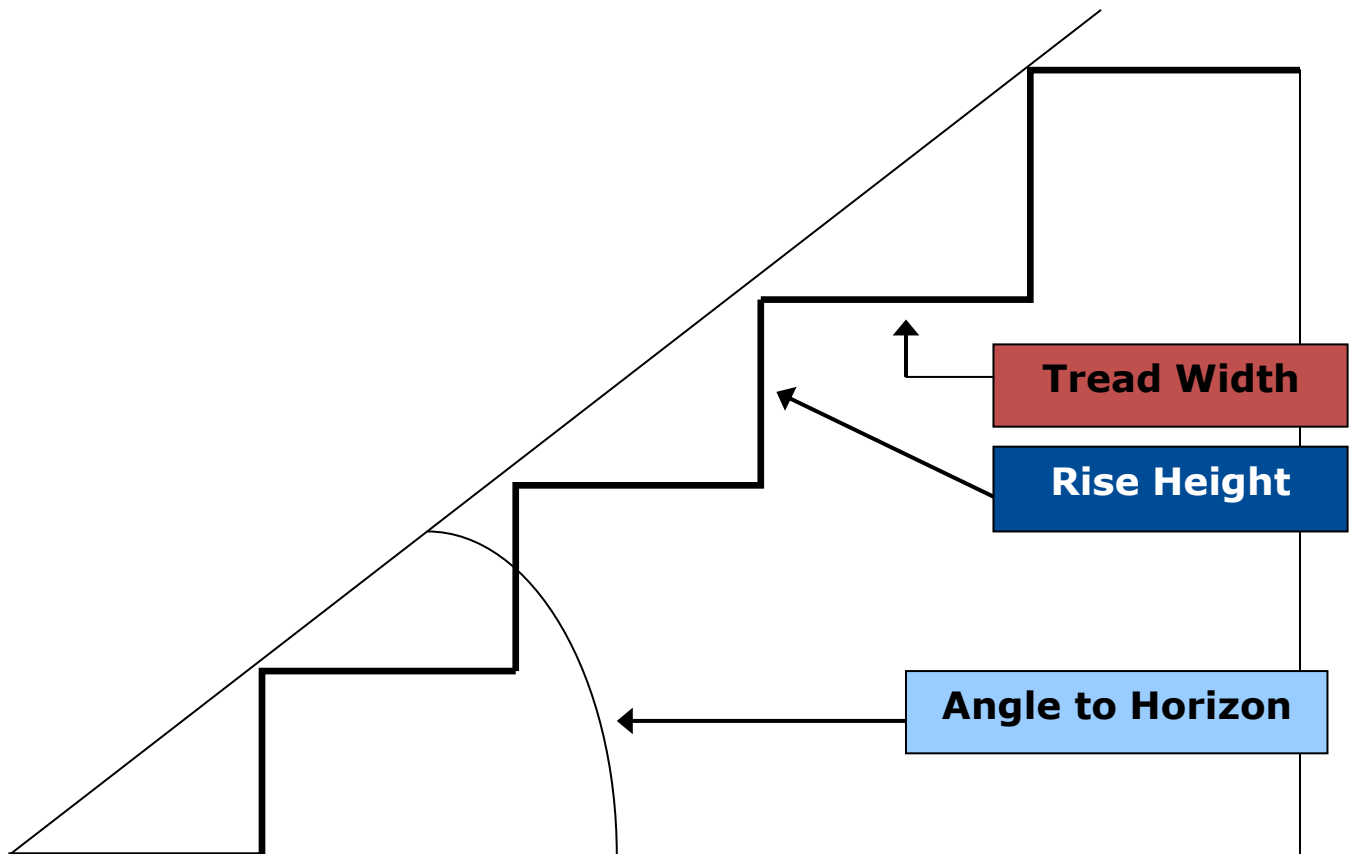
- ✓ ANSI-approved, heeled shoes
- ✓ Free from wear and tear
- ✓ Slip-resistant soles/heels
- ✓ Crush-resistant toe
- ✓ Ankle support

Always report all injuries immediately!

Requirement for all Industrial Stairs

(This is the same as Table D-1 in OSHA Standard 29 CFR 1910.24(e))

Angle to Horizon	Rise Height (in inches)	Tread Width (in inches)
30	6 ½	11
32	6 ¾	10 ¾
33	7	10 ½
35	7 ¼	10 ¼
36	7 ½	10
38	7 ¾	9 ¾
40	8	9 ½
41	8 ¼	9 ¼
43	8 ½	9
45	8 ¾	8 ¾
46	9	8 ½
48	9 ¼	8 ¼
49	9 ½	8



Burns Industrial Equipment Inc Walking/Working Surface Safety Audit

This audit is to be completed on at least a monthly basis. All "NO" answers must be addressed through some positive action toward correction.

General Conditions

Yes	No	Inspection Point
		Are all worksites clean and orderly?
		Are machines and work areas swept clean at the end of each shift or workday and are debris, scrap, and other waste picked up and removed from the work area?
		Are work areas adequately illuminated?

Walkways

Yes	No	Inspection Point
		Are aisles and passageways kept clear and passable?
		Are aisles and walkways marked as required?
		Are working surfaces kept dry and free of wet or otherwise slippery conditions?
		Are wet or slippery surfaces, inherent to the production operation, covered with non-slip material or otherwise made safe?
		Is there safe clearance for walking in aisles where motorized equipment is used?
		Are standard guardrails (42" high with a 21" mid rail and 4" toeboard) provided whenever aisles, walkways, or working surfaces are elevated more than 4 feet off the floor or work area?
		Are bridges or crossovers provided over conveyors or similar hazards at strategic locations to prevent people from crawling over or onto conveyor systems or similar hazards?

Floor Or Wall Openings

Yes	No	Inspection Point
		Does a cover, guardrail, or equivalent provide protection on all sides of floor openings?
		Are toeboards installed around the edges of permanent floor openings?
		Are grates or similar type covers over floor openings designed so foot traffic or rolling equipment will not be affected by the spacing or construction of the grate?
		Are unused portions of service pits and pits not actually in use either covered or protected by guardrails or equivalent?

Stairs and Stairways

Yes	No	Inspection Point
		Are standard stair rails or handrails on all stairways having four or more risers (steps)?
		Are all stairways at least 22" wide?
		Is there a vertical clearance of at least 7 feet from the leading edge of any stair tread to any overhead obstruction, which also includes the ceiling?
		Are all step risers on stairs uniform in height from top to bottom?
		Are steps on stairs and stairways designed or provided with a surface that renders them slip-resistant?
		Are stairway handrails located between 30-34" above the leading edge of the stair treads?
		Do stairway handrails have at least 3" of clearance between the handrails and the surface they are mounted to?

Elevated Surfaces

Yes	No	Inspection Point
		Are surfaces elevated more than 4 feet above the floor or ground protected with standard guardrails (a railing 42" from the floor with a mid rail at 21")?
		Are all elevated surfaces provided with a standard 4" toeboard?

All "NO" answers must be addressed through some positive action toward correction.

FALL PROTECTION INSTRUCTOR NOTES

The following provides a useful preparation outline for use by trainers presenting the Fall Protection program presentation to employees.

Training Objectives

- Review the fall protection program and train employees in proper facility procedures.
- Train employees to understand the dangers of falls and proper methods of preventing them.

Before Training

- Read the OSHA standards and the entire fall protection program.
- Complete the blank sections in the written program.
- Bring samples of proper (and, if available, worn or unacceptable) PPE.

Introduction for Training

- Begin by stressing the overall importance of safety in your facility.
- Stress the reasons why falls are so dangerous:
 - Department of Labor reports falls as one of the leading causes of traumatic on-the-job deaths.
 - Discuss other statistics regarding falls specific to your industry.
 - An injury resulting from a slip, trip or fall can result in tremendous pain and lost time at work.
- Provide overview on types of falls
 - Stress some of the common causes of slips, trips and falls in your workplace, and cite ways that employees can prevent them (e.g., housekeeping, walking instead of running, staying focused).
 - Provide an overview of the equipment used in your workplace that could present a falling hazard, and discuss methods of preventing falls for each piece. Emphasize the importance of inspecting equipment thoroughly before mounting or descending.
- Discuss PPE
 - Show employees examples of proper PPE and explain how to pick the right type.

General Guidelines

- Stress the importance of prevention of slips, trips and falls. Emphasize bullet points on each slide.
- Encourage employees to report injuries, and review the reporting procedure.
- Stress the importance of the individual employee being committed to his/her own safety and to follow all safety practices.
- Be open to questions or comments.

Conclusion

Slips, trips and falls are very common both in the workplace and outside of it. However, the danger of injuries is great, and you risk pain, time off work and even death if you fail to take the proper precautions.

FALL PROTECTION QUIZ

Name: _____ Date: _____ Score: _____

Place a checkmark on the line with the best answer:

1. Which of the following is not a characteristic your safety boots should have to protect you from falls?
 - a. Slip-resistant soles and heels
 - b. Ankle support
 - c. Crush-resisting toe
 - d. Thick leather
2. Elevated falls happen more frequently than same level falls.
 - a. True
 - b. False
3. When climbing a ladder, where should your foot touch the run?
 - a. The toe
 - b. The heel
 - c. Just in front of heel
 - d. Ball of foot
4. Which of these is not a way to prevent slips, trips and falls?
 - a. Clean up spills immediately
 - b. Always wear proper PPE
 - c. Take loads with both hands down stairs
 - d. Regularly inspect working and walking areas to identify hazards
5. Which of these presents a slip, trip and fall hazard?
 - a. Ladders
 - b. Ledges
 - c. Stairs
 - d. All of the above
6. As little as 3/8" rise in a walkway can cause a trip.
 - a. True
 - b. False
7. What usually causes slips?
 - a. Slippery surface
 - b. Not paying attention
 - c. An object in the walkway
8. Which of these is the safest way to prevent falls from equipment?
 - a. No riders
 - b. Grip tightly
 - c. Keep equipment dry
9. What is necessary when working at a high elevation?
 - a. Fall protection devices
 - b. Warning signs
 - c. Caution
 - d. All of the above
10. When climbing or descending stairs, what should you avoid?
 - a. Holding an object with both hands
 - b. Turning or focusing on something else
 - c. Wearing slippery shoes
 - d. All of the above

FALL PROTECTION QUIZ ANSWER KEY

- Which of the following is not a characteristic your safety boots should have to protect you from falls?
 - Slip-resistant soles and heels
 - Ankle support
 - Crush-resisting toe
 - Thick leather
- Elevated falls happen more frequently than same level falls.
 - True
 - False
- When climbing a ladder, where should your foot touch the rung?
 - The toe
 - The heel
 - Just in front of heel
 - Ball of foot
- Which of these is not a way to prevent slips, trips and falls?
 - Clean up spills immediately
 - Always wear proper PPE
 - Take loads with both hands down stairs
 - Regularly inspect working and walking areas to identify hazards
- Which of these presents a slip, trip and fall hazard?
 - Ladders
 - Ledges
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 - All of the above

