

# Ladders and Stairways

## I PURPOSE

To minimize the occurrence of falls from different levels involving personnel or materials while using stairways and ladders.

## 2 SCOPE

This procedure applies to all functional areas, operations, offices, including employees, vendors, visitors and contractors within the scope of the Integrated Management System (IMS).

## 3 DEFINITIONS AND ACRONYMS

### Definitions

**Approved** is certified to meet the minimum standards established by the HSLP Department. All PPE used in the operations shall meet at least the American National Standards Institute (ANSI) standards, American Society for Testing and Materials (ASTM), or other international or local standards which comply with or exceed those standards.

**Fixed ladders and stairways** are permanent structures used for the movement of personnel from one level to another.

**General Rules** are rules which apply to all employees, vendors, visitors, and contractors regardless of where they work or what they do.

**Hand-made ladders** are ladders which do not have a manufacturer's certificate, but they have a market equivalent.

**Job Specific** is a requirement directly associated with a specific job, task, or occupation.

**Ladder** is an access system or part of an access system in which the inclined angle from the horizontal is greater than 50 degrees but not more than 90 degrees consisting of a series of equally spaced steps that accommodate one or both feet.

**Portable ladder** is a structure used for the movement of personnel from one level to another, which may be transported manually and is constructed of non-conductive materials.

**Site** refers to any COMPANY facility.

**Stairway** is an access system or part of an access system in which the inclined angle from the horizontal is greater than 20 degrees but not more than 50 degrees and consisting of three or more steps.

**Three points of contact** means to always keep two hands and one foot, or one hand and both feet, in contact with the ladders.

**Trestle ladder** is a self-supporting portable ladder, adjustable in length consisting of a trestle ladder base and a vertically adjustable extension section, with a suitable means for locking the ladders together.

**Work Area Inspection** is an inspection of the area an employee may work in and/or has responsibility for (e.g. dump, pit, grind, crusher, etc.) to identify possible health and safety hazards/risks which then must be reported and corrected.

#### **Acronyms**

<b>HMR</b>	HSLP Management Representative
<b>HSLP</b>	Health, Safety and Loss Prevention
<b>IMS</b>	Integrated Management System
<b>PPE</b>	Personal Protective Equipment

## **4 ROLES AND RESPONSIBILITIES**

### **Document Owner**

HMR

### **Responsible Roles and Position-Holders**

**Contractors/Vendors** are businesses performing a service for the COMPANY. They are responsible for ensuring their employees, working on COMPANY sites, understand and comply with the requirements as outlined in this procedure.

**Employee and Contracted Employees** all employees in any position whether COMPANY or contracted employees working on any COMPANY site. They are responsible for complying with the requirements as outlined in this procedure.

**Visitors** are anyone not employed by the COMPANY in any capacity but are traveling or touring on a COMPANY site. They are responsible for complying with the requirements as outlined in this procedure

**HSLP** is any COMPANY employee working under and including the Regional Director of HSLP. They are responsible for periodically auditing for compliance to this procedure and assisting areas as needed in rules and regulations.

**A Supervisor/Foreman or Designee** can be a COMPANY employee or a contractor/vendor working or traveling on any COMPANY site. They are responsible for enforcement of all requirements, rules, and established guidelines as outlined in this procedure. They ensure personnel in his/her responsibility are provided with needed and necessary training for this procedure including work at heights and conduct regular inspections of ladders.

## **5 DIRECTION**

All employees, vendors, contractors, and visitors traveling/working on site shall comply with and ensure personnel accountable to them comply with the following requirements of this procedure.

## General Rules

Stairways and ladders shall be inspected on a regular basis as a part of the Planned General Inspection program, employee and supervisor daily workplace examinations, and HSLP Field compliance checks. Checklists should be used if available and inspection forms shall be kept on file.

Portable ladders shall be inspected prior to use and after use before storing.

Substandard conditions detected in the structure of a stairway or ladder shall be immediately reported to a supervisor.

Portable ladders shall be stored properly when job is complete.

Stairways and ladders must be kept free of oil, grease, or any other slippery substance.

The area surrounding ladders and stairways must be kept clean and free of obstacles.

The top of straight, extension, or trestle ladders shall be secured to the structure or the ladder attended while in use.

Ladders shall project at least 3 feet above the level to be accessed.

Heavy duty industrial ladders (Type III -300 LBS capacity) shall be used for all portable application.

In going up or down a ladder, the employee must:

- a** Be facing the ladder.
- b** Not carry anything in their hands when climbing and hold on to the side beams or rails. (Three points of contact)
- c** Carry all tools and other materials in a tool belt, bag, or other device to allow for safe climbing or descending. If necessary, the materials or tools shall be hoisted mechanically.
- d** Go down the stairs step by step.

The width of the ladder should be between 16 inches and 18 inches.

In going up or down a stairway, the employee must:

- a** Have one hand free at all times in order to firmly hold a handrail.
- b** Use hands-free climbing whenever possible.
- c** Apply a minimum of two-point contact, that is, always keep one hand and one foot, or both feet, in contact with the stairway.

## Fixed Ladders and Fixed Stairways

Fixed Ladders must project 3 ft. above the landing or surface they provide access to or must include a handrail above the landing, except for those cases where they include a cage-like protection.

Fixed Ladders, on mobile equipment, must include landings fitted with handrails.

The height for the installation of handrails/railings at stairways shall be no more than 38 inches or less than 34 inches measured vertically from upper surface of top rail to surface of the leading edge of treads with a mid-rail at approximately halfway between top rail and leading edge of treads.

- a** Handrail height for walkways and working platforms shall be no more than 45 inches and not less than 39 inches from top rail to working surface with a mid-rail at approximately halfway between top rail and working surface.

Fixed Ladders 30 feet or more in length with an inclination of 70° to 90° from the horizontal must include a cage-like protection. This protection must start at no more than 7 ft from the walking surface, and must exceed by no less than 3 ft the height of the stairway at its highest point. Additionally, a chain or safety bar must be installed at the upper part. The chain, safety bar, or gate must be put in place or closed when people are working from or on the surface being accessed.

The minimum clearance between the rungs and any obstacle behind the rungs must be 9 inches.

Steps must be 11 inches apart.

Fixed ladders and Stairways must be inspected regularly as a part of Planned General Inspections and deficiencies documented on the General Inspection Form. Areas subjected to corrosive environments may require more frequent inspections and should be included in the preventative maintenance program.

### **Portable Ladder**

All portable ladders must not be used beyond the manufacturer recommendations.

Follow all warning labels fixed to portable ladder systems.

All work conducted from portable ladders (straight, extension, or trestle ladder) is considered work at heights, for which the applicable standards should be complied with.

Ladders must be inspected on a daily basis before being used, checking: steps, beams, and the condition of metal parts, splinters, cleanliness, and coupling arms in the case of trestle ladders.

Defective ladders that risk the safety of worker must be marked with a danger/warning tag while they are not in service and they must be reported to the Supervisor.

Makeshift or hand-made ladders are not allowed.

All portable ladders used for electrical works must be made from a non power-conductor material (dielectric).

Ladders must rest on a flat horizontal surface. Boxes or other objects should never be used to reach a greater height.

Portable ladders shall not be painted, as the paint could conceal defects.

When not in use, for storage purposes, portable ladders will be stored in a safe manner and protected from the weather and/or other corrosive elements.

Ladders shall be fitted with an antiskid material on the base.

If the ladders are placed in access ways, then the appropriate hazard-warning tapes (barrier) should be used.

When working on a ladder, always rest both feet on one step.

Only one worker is allowed to be on the ladder.

Tools or materials must never be placed on the steps unless designed for this application.

The position of the ladder must be changed as needed to avoid working in an uncomfortable position or losing balance.

During transport, if ladders exceed the length of a vehicle's bed, a structure that guarantees the safe transport of the ladder must be used.

### **Step Ladders**

All portable ladders must not be used beyond the manufacturer recommendations.

Follow all warning labels fixed to portable ladder systems.

They must be completely opened and the coupling arm should be fully extended and locked.

They must never be used as straight-line ladders.

Steps on step ladders will only be used as recommended by the manufacturer.

They must be fastened at the upper end to solid structures or must be held steady by another person.

Never allow persons to stand on both sides of a ladder at the same time.

### **Straight-Line or Extension Ladders.**

All portable ladders must not be used beyond the manufacturer recommendations.

Follow all warning labels fixed to portable ladder systems.

If a straight-line ladder is used (simple or extendible) as a work platform, then the upper end must be fastened to a solid structure or else the ladder must be held by another person.

In the preceding case, the upper three steps must not be used, that is, the worker must not stand on the upper three steps to perform the work.

If a straight-line ladder is used to gain access to an upper surface, it must project at least 3 feet above that surface.

If an extendible straight-line ladder is used, the user must make sure, after extending one section, that the safety pins or locks are hooked and that the extension rope is tied to a step or a beam at the base of the ladder.

Extendible ladders must include no less than three overlap steps.

An extendible ladder must not be disassembled to use its different sections separately.

Individual ladders should not be tied together to obtain longer sections or to create an extendible ladder

Single-section ladders should not be more than 18 feet long. Extendible ladders, fully extended, should not be more than 35 feet long.

The angle of inclination must maintain the following ratio: 1 yard in horizontal distance (from the base of the ladder to the support surface) x 4 yards in total length i.e. a 1:4 horizontal to vertical ratio.

Wooden ladders shall not be used.