

Ladder Safety Policy Summary

Ladders present one of the major hazards in commercial industrial or construction work, and statistics reveal that the improper use of ladders is a leading cause of many serious accidents. A survey of ladder-related accidents reveals the four most common causes are: 1) structural failure of the ladder; 2) ascending and descending the ladder improperly; 3) failure to secure the ladder at the top and/or bottom; and 4) carrying objects in the hands while ascending or descending the ladder.

Ladder safety is of vital importance as it concerns the well-being of the employees of the Building Technologies (BT) Division of Siemens Industry, Inc. and its customers. The following ladder safety procedures will address the primary safety considerations, inspection, selection, and care of workplace ladders. Although these procedures are comprehensive, they are not totally exhaustive of all potential ladder safety issues which BT employees may encounter; therefore, jobsite specific hazards and customer-related specific hazards which may affect ladder safety should also be taken into careful consideration

1.1 Special Considerations

For specific risk-related reasons, BT asserts the following special requirements concerning ladder usage and safety:

- BT-owned ladders shall not be offered or allowed for usage by other companies/contractors or customers.
- BT employees shall not use ladders provided by customers or other companies/contractors.

1.2 Ladder Selection

- Great care should be taken to ensure the proper selection of the appropriate ladder for the job; specific detail should be given to ensuring suitable length, weight limits, and overall size of ladders selected.
- Ladders shall only be used for their designed purpose.
- Extension ladders shall not be disassembled to create one-piece straight ladders.
- Extension ladders or straight ladders shall not be used for scaffolding, planking, or to create elevated walking surfaces.

1.2.1 Straight Ladders

- Only straight ladders with properly manufactured UL-approved safety footing shall be used.
- All straight ladders, including extension-type ladders, **shall extend AT LEAST 3 FEET (36") ABOVE** the elevated surface accessed.
- Straight ladders, including extension-type ladders, **shall be tied off at the top and**

secured at the bottom when placed for service.

1.2.2 **Step Ladders**

- Step ladders, which are sometimes referred to as “A-frame” ladders, must have positive locking spreader braces, which shall be inspected to be in the locked position before the ladder is used. Thereby, the ladder will be verified to be in the fully open position.
- Step ladders shall not be used in place of straight ladders or extension ladders.
- Step ladders (which are not normally tied-off) which extend above 10 feet must be secured from tipping or kick out while work is being performed from the ladder.

Never stand on the top step or top of a step ladder (manufacturer’s warning labels give clear guidance in this avoidance).

1.2.3 **Job-built Ladders**

- Job-built ladders are not approved for use by BT.
- Where job-built ladders are required for specific erections for which BT holds direct responsibility (such as construction projects), then a licensed contractor should be secured for the manufacture and installation of such ladders. Such contractors must present documented evidence of competent

engineering and erection which adhere to specific OSHA regulatory requirements (as per 29 CFR 1926.1053) regarding step-spacing, width, length, footing, and materials used.

1.3 General Ladder Usage

- Never use chairs, buckets, barrels, benches, or tables to work on elevated surfaces. Appropriate ladders must be used at all times.
- Great care must be taken where ladders are used near live electrical circuits. The manufacturer's specifications on the dielectric rating of ladders must be ascertained and fully understood. Most ladders, unless specifically designed for high-voltage use, should not be erected within the "10 Foot Rule" boundary of energized power lines.
- Where extenuating hazards exist which may cause a potentially unsafe condition for safe ladder usage, barricades and signage shall be used to demarcate the safe ladder usage zone. These signs and barricades shall clearly delineate the safe zone of ladder operation and shall be easily recognizable.
- Only ANSI (American National Standards Institute) TYPE 1-A, EXTRA HEAVY DUTY ladders with a minimum 300 pound workload rating shall be used.
- Where straight or extension ladders are used, the 4-to-1 RULE shall be employed. The ladder footing shall be placed at distance of $\frac{1}{4}$ of the total ladder length (in feet) from the vertical surface of the

elevated position to be worked (i.e. the footing for a 20 ft. ladder shall be at least 5 feet away from the vertical surface).

- Only light, temporary work shall be performed while positioned on a ladder.
- Leaning, stretching, pulling, pushing, prying, or overreaching from ladders shall be avoided.
- Ladder positioning shall not be attempted while on the ladder – always dismount safely before moving or positioning any ladder.
- Do not place ladders against windows, in front of doors, or other potential unstable openings.
- When ladders are used near doorways, aisleways, and passageways or near traffic crossings, barricades and appropriate warning signage shall be employed.
- When ascending or descending ladders, workers should face the ladder and use both hands to hold on to the side-rails. Materials or tools shall not be hand carried up a ladder; if materials, tools, or equipment must be raised to a position on the ladder, then ropes and other devices shall be employed to raise the tools or equipment into position. The 3 Points of Contact Rule shall always be employed (one hand and two feet on the ladder at all times).
- Ascending or descending of ladders shall always be performed by only one person at a time.

- Materials, tools, or equipment shall never be left on ladders when the worker is not present.
- Ladders shall be secured in position when stored against walls or other surfaces in an upright position.
- Ladders shall not be painted. They must be clear enough of markings or other opaque coatings to perform unhindered ladder inspections.
- Never jump on or onto a ladder. This can create weight loads in excess of the ladder's rating.

1.4 Ladder Inspection

- Ladders shall be inspected for general cleanliness and structural integrity before each use. They shall be verified to be free from mud, debris, ice, snow, or any other contamination which could compromise foot treading.
- Periodic specific inspections should be focused on the extent of sun damage incurred by vehicle roof-top ladder storage. When sun damage is evident (typically loose fibers will be visible), or when required manufacturer's safety warning labels or rating labels are no longer legible, the ladder shall be promptly removed from service until replacement labels can be obtained, or in the case of severe damage, the ladder should be destroyed.
- Ladders shall be inspected before each use for overall integrity and operability.

- Ladders shall be immediately tagged out of service when inspections reveal damage or loss of ladder integrity. Where damage is severe, ladders should be destroyed by disassembly or cutting, and shall be disposed of properly and according to local municipal ordinances.