Job-made Wooden Ladders

Workers who use job-made wooden ladders risk permanent injury or death from falls and electrocutions. By understanding the hazards that workers are likely to encounter while working on job-made wooden ladders, employers can take steps to reduce injuries through proper training.

What is a Job-made Wooden Ladder?
A job-made wooden ladder is a ladder built at the construction site; it is not commercially manufactured. A job-made wooden ladder provides access to and from a work area, but is not intended to serve as a work platform. These ladders are temporary, and are used only until a particular phase of work is completed or until permanent stairways or fixed ladders are installed.

Training Requirements
Employers must provide a training program for employees who use ladders and stairways. The training must enable each worker to recognize ladder-related hazards and to use ladders properly to minimize hazards. Examine the following topics related to job-made work ladders, and tips to keep your workers safe:

Side rails:
- Construction-grade lumber should be used for all components.
- Side rails of single-cleat ladders up to 24 feet long should be made with at least 2-by-6-inch nominal stock lumber.

- Side rails should be continuous, unless splices are the same strength as a continuous rail of equal length.
- The width of single-rung ladders should be at least 16 inches, but not more than 20 inches between rails measured inside to inside.
- Rails should extend above the top landing between 36 inches and 42 inches to provide a handhold for mounting and dismounting, and cleats must be eliminated above the landing level.

Cleats:
- Cleats should be equally spaced 12 inches on center from the top of one cleat to the top of the next cleat.
- Cleats should be fastened to each rail with three 12d common wire nails, which are nailed directly onto the smaller surfaces of the side rails.

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- Making cuts in the side rails to receive the cleats is not advisable.
- Cleats should be at least 1 inch by 4 inches for ladders 16 feet to 24 feet in length.

**Filler Blocks:**
- Make sure the filler is 2-by-2-inch wood strips.
- Insert the filler between cleats.
- Nail the filler at the bottom of each side rail first. Nail the ends of a cleat to each side rail with three 12d common nails. One nail is placed 1½ inches in from each end of the filler block.
- Nail the next two fillers and cleat, and then repeat. The ladder is complete when a filler is nailed at the top of each rail.
- Make all side rails, rungs and fillers before the ladder is assembled.

**Inspecting Ladders**
Ensure that ladders are properly inspected to guarantee worker safety:

- A competent person must visually inspect job-made ladders for defects on a periodic basis and after any occurrence that could affect their safe use.
- Defects to look for include structural damage, broken/split side rails (front and back), missing cleats/steps and parts/labels painted over.
- Ladders should be free of oil, grease and other slipping hazards.

**Do’s For Safe Ladder Use**
To prevent workers from being injured from falls from ladders, employers are encouraged to adopt the following practices:

- Secure the ladder’s base so that it does not move.
- Smooth the wood surface of the ladder to reduce injuries to workers from punctures or lacerations and to prevent snagging of clothing.
- Use job-made wooden ladders with spliced side rails at an angle so that the horizontal distance from the top support to the foot of the ladder is one-eighth the working length of the ladder.
- Ensure that job-made wooden ladders can support at least four times the maximum intended load.
- Only use ladders for the purpose for which they were designed.
- Only put ladders on stable, level surfaces that are not slippery, unless they are secured to prevent accidental movement.
- Ensure that the worker faces the ladder when climbing up and down.
- Maintain a three-point contact (two hands and a foot, or two feet and a hand) when climbing a ladder.
- Keep ladders free of any slippery materials.
- Maintain good housekeeping in the areas around the top and bottom of ladders.

**Don’ts For Safe Ladder Use**
To prevent injuries, employers are encouraged to avoid the following practices:

- Painting a ladder with nontransparent coatings
- Carrying any object or load that could cause the worker to lose balance and fall
- Subjecting a job-made wooden ladder to excessive loads or impact tests