Part XI SCAFFOLDS, STAGES AND WORK PLATFORMS

Index

Section		Title		Revision Date
E148		PORTABLE LADDER STANDARDS		September 2009
E154		RESTRICTIONS ON USE		September 2009
E162		GROUNDING		September 2009
E197		FALL PROTECTION		September 2009

Explanations

The Standards listed below are referenced in this Part of the Regulations.

Standard Agency	Standard Number	Standard Title
CSA	*CAN3 - Z11*	*Portable Ladders*
ANSI	*A14.1 – 1990*	*Safety Requirements for Portable Wooden Ladders*
ANSI	*A14.2 – 1990*	*Safety Requirements for Portable Metal Ladders*
ANSI	*A14.3 – 2002*	*American National Standard for Ladders – Fixed Safety Requirements*
ANSI	*A10.8 – 1998*	*American National Standard for Construction and Demolition Operations – Scaffolding – Safety Requirements*
ANSI	*A14.7 – 1991*	*Safety Requirements for Mobile Ladder Stands and Mobile Ladder Stand Platforms*
CSA	*CAN/CSA*	*Safety Code for Suspended Powered Platforms*

	– Z271	
CSA	*CAN/CSA – B354.4*	*Self-propelled Boom Supported Elevating Work Platforms*
ANSI	*ANSI/SIA A92.5*	*Boom – Supported Elevating Work Platforms*
CSA	*CAN/CSA – B354.2*	*Self – Propelled Elevating Work Platforms*
ANSI	*ANSI.SIA A92.6*	*American National Standard for Self – Propelled Elevating Work Platforms*
CSA	*CAN/CSA – B354.1*	*Portable Elevating Work Platforms*
ANSI	*ANSI/SIA A92.3*	*American National Standard for Manually Propelled Elevating Aerial Platforms*
CSA	*CAN/CSA – C225*	*Vehicle – Mounted Aerial Devices*
CSA	*CAN/CSA – Z91*	*Health and Safety Code for Suspended Equipment Operations*

Section E148 PORTABLE LADDER STANDARDS

Subsection E148(2)(a) & (b)

A portable ladder certified or rated as meeting the requirements of the CSA or ANSI standards is classified into one of the following categories:

Intended Use	Load Rating	Ladder Grade/Type	Agency
Construction, utilities, and industrial	Heavy duty	1	CSA
		I or IA	ANSI
Light maintenance, office, and farm	Medium duty	2	CSA
		II	ANSI
Household only	Light duty	3	CSA
		III	ANSI

NOTE: Only CSA Grade 1 or ANSI Ladder Type IA or Type I ladders should be used to support ladder jacks and scaffold planks.

Section E154 RESTRICTIONS ON USE

Subsection E154(4) Under normal circumstances, workers are required to use some type of fall protection system (e.g. guardrails, nets, personal fall arrest system, etc.), whenever they can fall a distance of 3 m or more. This section outlines three conditions which must be satisfied to permit a worker to move up or down a portable ladder without having to use fall protection. If any one of these three conditions cannot be met, some form of fall protection is required.

Subsection E154(4)(a) The work must be a “light duty task of short duration”, such as inspections or changing a light bulb.

Subsection E154(4)(b) While doing the task, the worker must keep his or her centre of gravity (generally indicated by the belly button) between the side rails of the ladder.

Section E162 GROUNDING

This guideline describes when a metal scaffold near an energized high-voltage conductor or equipment must be grounded. It also provides guidance to consider grounding when a metal scaffold is near a low voltage but "high energy" system.

When a scaffold is erected parallel to an energized high-voltage electrical conductor or equipment, there is a potential hazard of voltage being induced into the scaffold. The actual voltage level induced into the scaffold will be influenced by a number of factors such as:

- Distance from the conductor or equipment (whether overhead or underground),
- Length of scaffold parallel to the conductor or equipment, and
- Voltage and/or current flow in the conductor or equipment.

The scaffold should be grounded immediately in either of the following situations:

1. A worker feels an electric shock at any time, including during the erection of the scaffold, OR
2. A voltage potential of more than 30 volts is measured between the metal scaffold and a ground point at least 5 metres (15 feet) from the base of the scaffold.

Effective Grounding

There are different methods of grounding the scaffold so that any induced voltage is immediately dissipated so as not to pose a hazard to workers. The ground-connecting fixture should be connected to the scaffold with a #2 AWG copper conductor. The scaffold should be grounded at both ends. Suitable ground-connecting fixtures are ground plates or rods.

Section E197 FALL PROTECTION

Sections 197(1) & (2) deal with occupants of work platforms, rather than cranes, hoists and their rigging, which are covered in Parts XIV and XV.

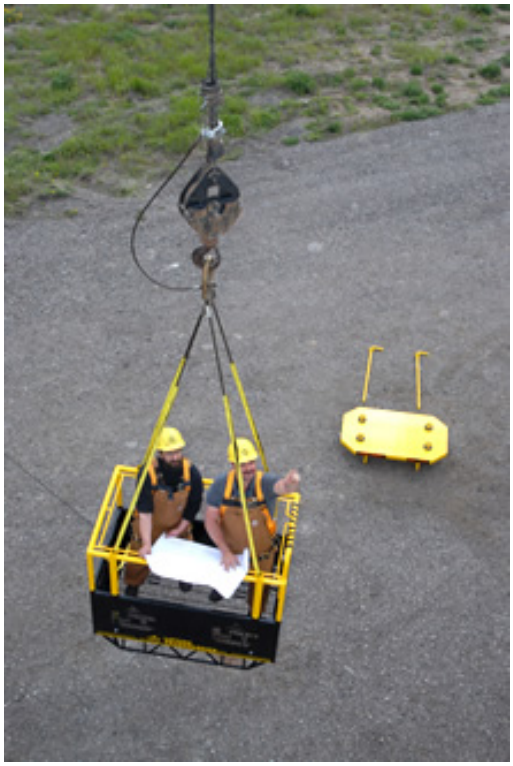
This requires that the approval and certification of a crane, or hoist, supporting work platform must meet the requirements of *Section 191,* which states:

> A work platform suspended from a crane or hoist, or attached to a crane boom shall be approved and certified by a professional engineer.

As well; *Section 194* which states:

> Rigging used to suspend a work platform from a crane or hoist shall have a safety factor of at least 10, and shall be used exclusively for suspending the work platform.

If a platform is suspended from a crane or hoist and anchorages are provided on the platform, an additional safety sling, designed to a safety factor of 10 based on the all-up weight of the occupied platform, must be interposed between the platform (i.e. the master link) and an anchorage above the load hook that will prevent the platform from falling more than 15 cm (6 in.) if the platform becomes dislodged from the hook.



For further information, there are posters available from the Occupational Health and Safety Division, which outline some of the requirements for erecting access frame scaffolding.