

CSA Z462



CANADIAN STANDARDS
ASSOCIATION

Workplace Electrical Safety



Scope

- Not an “Arc Flash Standard”
- 90.1(A) Covered. This standard addresses those electrical safety requirements for employee workplaces that are necessary for the practical safeguarding of employees in their pursuit of gainful employment.



Four Chapters:

- **Chapter 1 Safety-Related Work Practices**
- **Chapter 2 Safety-Related Maintenance Requirements**
- **Chapter 3 Safety Requirements for Special Equipment**
 - **Electrolytic Cells; Batteries and Battery Rooms**
 - **Use of Lasers; Power Electronic Equipment**
- **Chapter 4 Installation Safety Requirements**
- **Several informative Annexes**



Chapter 1 Safety-Related Work Practices

- Article 100 Definitions
- Article 110 General Requirements for Electrical Safety-Related Work Practices
- Article 120 Establishing an Electrically Safe Work Condition
- Article 130 Working On or Near Live Parts



Article 110 General Requirements for Electrical Safety-Related Work Practices

- 110.1 Scope.
- 110.6 Training Requirements.
- 110.7 Electrical Safety Program.
- 110.8 Working On or Near Electrical Conductors or Circuit Parts.



Article 120 Establishing an Electrically Safe Work Condition

- 120.1 Process of Achieving an Electrically Safe Work Condition.
- 120.2 Working On or Near De-energized Electrical Conductors or Circuit Parts That Have Lockout/Tag-out Devices Applied.
- 120.3 Temporary Protective Grounding Equipment.



Article 130 Working On or Near Live Parts

- 130.1 Justification for Work.
- 130.2 Approach Boundaries to Live Parts.
- 130.3 Flash Hazard Analysis.
- 130.5 Work On or Near Uninsulated Overhead Lines.
- 130.7 Personal and Other Protective Equipment.



Purpose

- Stay abreast of and report proposed developments of the NFPA 70E standard to the Z462 Technical Committee

Objectives

- To ensure Z462 developments harmonize to the extent possible with the current edition and future revisions of NFPA 70E
- Assist the Z462 Technical Committee to submit proposals to influence the development of the next and future editions of NFPA 70E



Subcommittee Members

Ron Adcock

SaskPower

Bill Anderson

Proctor & Gamble

Paul Goggan

Canadian Auto Workers Union

Francis Hardy

Electrical Safety Authority, ON

Kerry Heid

Magna Electric & NETA President

Tom Neal, Chair

Neal Associates Ltd.

Daniel Roberts

Schneider Electric

Article 90 – Scope

- No changes to the existing exclusions

Chapter 4 – Installation Safety Requirements

- Deleted

Chapter 1 – Article 130

- $HRC\ 0 \leq 1.2\ \text{cal/cm}^2$
- Significant changes to the Tables
 - HRC -1 Deleted; HRC 1 PPE \approx HRC 2 PPE; New Table 130.7(C)(9) Tasks; New Table 130.7(C)(10) Format
- Arc rating of clothing will be determined based on the FR layers only
- New 130.3 (D) Equipment Labeling



Clarity and consistency in the use of terms

- **Live parts** → *energized electrical conductors or circuit parts*
- **Working on or near** → *within the Limited Approach Boundary; when exposed to electrical hazards*
- **Exposed (as applied to live parts)** → *relationship to arc flash hazards reconsidered*



Article 110.1 Scope.

- Chapter 1 covers electrical safety-related work practices and procedures for employees who work on or near exposed energized electrical conductors or circuit parts in workplaces that are included in the scope of this standard.



Article 110.1 Scope.

- Chapter 1 covers electrical safety-related work practices and procedures for employees who ~~work on or near exposed energized electrical conductors or circuit parts~~ may be exposed to an electrical hazard in workplaces that are included in the scope of this standard.



Chapter 1 – Article 100 Definitions:

Flash Protection Boundary. An approach limit at a distance from exposed live parts within which a person could receive a second degree burn if an electrical arc flash were to occur.



Chapter 1 – Article 100 Definitions:

Boundary, Arc Flash Protection. When an arc flash hazard exists, an approach limit at a distance from ~~exposed live parts~~ a prospective arc flash source within which a person could receive a second degree burn if an electrical arc flash were to occur.



Chapter 1 – Article 100 Definitions:

- **Arc Flash Hazard.** A dangerous condition associated with the possible release of energy caused by an electric arc.
- **FPN No. 1: A flash hazard may exist when energized electrical conductors or circuit parts are exposed or when they are within equipment in a guarded or enclosed condition, provided a person is interacting with the equipment in such a manner that could cause an electric arc. Under normal operating conditions, enclosed energized equipment that has been properly installed and maintained is not likely to pose a flash hazard.**
- **FPN No. 2: See Table 130.7(C)(9) for examples of activities that could pose a flash hazard.**
- **FPN No. 3: See 130.3 for flash hazard analysis information**



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End

