

IEEE IAS ELECTRICAL SAFETY WEBINAR

August 6, 2020

Copyright Material Schneider Electric

Daniel Roberts
Senior Member, IEEE
Schneider Electric Canada
daniel.roberts@se.com

Abstract – Within each country the authority having jurisdiction establishes laws for the protection of workers. Depending on which country, this might be done Nationally, such as in India, or by State, Province or Territory, such as in Canada and to some extent, in the United States.

Occupational Health and Safety Regulations should be viewed as a minimum performance threshold. To be effective they must be supplemented by the “how to” guidance provided by Occupational Health and Safety standards.

This Webinar focuses on two standards, ISO 45001 and CSA Z462, and how they are used in industry to enhance workplace electrical safety.

I. REGULATIONS

The Occupational Safety, Health and Working Conditions Code, 2019 (Pending Parliamentary Approval)
Chapter III Duties Of Employer And Employees, Etc.

6. (1) Every employer shall,—

(a) ensure that workplace is free from hazards which cause or are likely to cause injury or occupational disease to the employees;

(d) provide and maintain, as far as is reasonably practicable, a working environment that is safe and without risk to the health of the employees;

<https://www.prsindia.org/billtrack/occupational-safety-health-and-working-conditions-code-2019>

II. STANDARDS

ISO 45001:2018(E) Occupational health and safety management systems – Requirements with guidance for use

- ISO 30000:2009(E) Risk management – Principles and guidelines
- ISO/IEC Guide 51:2014(E) Safety aspects — Guidelines for their inclusion in standards
- IEC/FDIS 31010:2009(E) Risk management — Risk assessment techniques

CSA Z462-2018 Workplace electrical safety

III. ISO 45001 OVERVIEW

Management systems improve organizational performance by applying a systematic approach to a specific risk. All management systems employ six common elements: Leadership commitment; a management system Policy; and a repeating cycle of Plan-Do-Check-Act (PDCA).

Two or the many benefits of a management system are:

- 1) Continuous improvement – Management systems recognize that the best state for a given risk cannot be achieved at once. A fundamental principle of management systems is iteration. Repeating the PDCA cycle can bring an organization closer to the goal of risk reduction and operational excellence.
- 2) Sustainability – The consistency of a management system approach facilitates the sustainability of

IV. CSA Z462 WORKPLACE ELECTRICAL SAFETY – KEY PROVISIONS

Electrical safety policy – de-energization requirement, when and how

Electrical safety program

- Controls to measure and monitor the program
- Maintenance and inspection of electrical equipment
- Worker qualifications and training
- Risk Assessment and risk control procedure for workers
- Human performance tools
- Job safety planning
- Incident investigation
- Host employer and contractor employer responsibilities
- Care and maintenance of personal and other protective equipment
- Auditing