Top 2018 NFPA 70E Updates
Worth Discussing
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Introduction:

Why Does the NFPA 70E Standard Update Every 3 Years?

Electrical equipment and electrical safety devices are constantly being changed and improved, hence why your electrical safety program must address those changes. The NFPA 70E Committee addresses these changes and updates the standard every three years as part of keeping up with current technology and safety concerns. This is a standard not only used by facility managers and safety officers, but also by OSHA inspectors, continually educating them on existing trends in electrical safety. This standard upon final approval will go into effect on August 10, 2017. In this paper, we will go over the top 2018 NFPA 70E updates worth discussing.
Are Qualified Persons Required to Complete a Job Safety Analysis (JSA) Before Starting Work?

Article 110.1 (I)

Article 110.1 (I) states that if the proposed NFPA 2018 changes are implemented, a qualified person will also need to complete a Job Safety Analysis (JSA) before work or troubleshooting is performed. That JSA would require such “qualified person” to:

- Identify All Tasks Associated With the Performance of the Job
- Identify All Specific Hazards With Each Task
- Determine the Severity and Likelihood of Unintentional Injury for Each Task
- Identify What Control Measures Can Be Used to Reduce Injuries

Lockout/Tagout Has Been Completely Reorganized and Reworded

Article 120.2 (D)(1)

The reasons for reorganization and rewording are for clarity and usability purposes. Sections are broken down as such:

- What Needs to Be in a LOTO Program/Plan
- LOTO Principles
- Equipment Required to Complete a LOTO
- Correct Procedures/Processes Needing to Be Followed
- How to Correctly Verify “Electrically Safe Work Conditions”
What Should We Look for in PPE Labels in 2018?

**Article 130.7 (C)(16)**

Article 130.7 (C)(16) addresses PPE conformity. Purchasing the right PPE has always been a challenge for companies or those individuals responsible for making such decisions. To address the issue, the NFPA 70E Standard has proposed to utilize the ANSI/ISEA 125-2014 national consensus standard for conformity assessments of safety and personal protective equipment in its 2018 edition. This conformity assessment provides an organized and systematic way for a supplier to verify that a product meets the requirements of a performance standard, communicating verification to the purchaser and user.

The NFPA 70E 2018 has proposed to add the new article 130.7 (C)(16) personal protective equipment conformity assessment. The purpose for the new article is to promote consistency regarding personal protective equipment testing. Three levels of conformity testing can be used by the manufacturer or supplier:

1. Supplier or manufacturer makes a self-declaration that the product meets all requirements of the ANSI/ISEA 125-2014 Standard performance claims.

2. Supplier or manufacturer makes a self-declaration that product meets standard requirements but must also have a registered 9001 quality management system in place as protocol for PPE testing under an iso-17025 accredited testing laboratory.

3. Products then must be certified by an ISO 17065 accredited independent third-party certification organization. The testing must comply with such certification organization, and all products must be marked with the certified label.

If proposed changes are accepted, the conformity assessment would be effective on January 1, 2018. It then means that all personal protective equipment referenced in table 130.7 (C)(14) must comply with the associated reference standard section 9 of ANSI/ISEA 125 with conformity assessment levels 1, 2 or 3 marked on equipment and arc flash clothing labels in its entirety.
Arc Flash and Shock Hazard Risk Assessment Now Include the ‘Potential of Human Error’

**Article 110.1 (H)**

This new article explores the “human error concept” added to both job safety analysis and job planning in Annex Q. When filling out a JSA or a job safety plan, a new “human error concept” is to be applied to workplace electrical safety under the concept of a human performance factor. Studies have indicated that human error often is a root cause of incidents, hence why the addition is of high value.

Annex Q addresses the validity of human performance and factors affecting workplace, electrical safety, and job performance, explaining how high stress, unfamiliar situations, lack of attention, worker fatigue, the surrounding environment, and human nature itself can affect overall human performance in the workplace. Additionally, Annex Q addresses the fact that workers may become too familiar with common tasks and therefore become less observant to the real risk still prevalent in some situations. Such perceived behavior can cause what is commonly called “unintended blindness” and/or insensitivity to the hazards of the job. To address these human characteristics, a “qualified person” will need to be trained in these factors:

1. **Identify Possible Causes of Human Error**
2. **How Human Performance Can Affect Job Performance**
3. **Using Human Performance Tools Provided in Annex Q**
4. **Completing a Job Site Review of Human Performance Tools Used**

As an example, a “qualified person” would need to be able to determine if each individual assigned a task is capable of completing the task mentally, physically, and emotionally.
Electrical Safety Programs Must Include a Section on How to Investigate an Incident/Accident

Electrical safety programs are now entailed to include a new section on how to investigate electrical incidents/accidents in a facility. This process, though, must be specific to your organization and must include a root-cause analysis, near-miss reporting, and a follow-up investigation. Ultimately, safety programs need to define which employees should call to report incidents/accidents within the proposed time frame.

Tips and Advice

As the role of the “qualified person” keeps expanding, it is very important to ensure that the electrical safety training electrical workers receive also expands. Online training may often be more convenient, but must be no substitute for high-quality, hands-on, instructor-led training. The 2018 NFPA Standard will be in effect on August 10, 2017, and we want you to stay current with all the changes and additions to all regulations. Consider Lewellyn Technology’s dedicated and highly knowledgeable instructors for your training needs.

Here are some steps to get your facility up-to-date with 2018 NFPA 70E:

1. Make Sure All “Qualified Workers” Have Access to the 2018 NFPA 70E Standard
2. Ensure Your Electrical Safety Program Is Updated
3. Schedule On-site NFPA 70E Electrical Safety Training
Conclusion

We hope this will help you prepare your facility for the changes and added regulations stipulated in the NFPA 70E for 2018. Let us know if this article has served you well, and as already mentioned: the NFPA 70E 2018 will be implemented on August 10, 2017. Contact us on the next page to speak with one of our safety experts if you’re interested in learning how to adapt these changes into your safety program.
Why Partner with Lewellyn Technology?

Lewellyn Technology has been improving workplace safety since 1993. Our core business is eliminating electrical and combustible dust hazards in facilities of different industries nationwide. Our team of industry leaders and recognized OSHA experts work to ensure the compliance aspect is part of our solution, keeping safety of your employees as a priority. Lewellyn Technology provides multi-year project support and long-term partnerships; that is why we are there for you after the delivery to ensure excellent service and results.

We have in-house technicians nationwide which makes it easier for our clients to know who they are dealing with. Part of what makes us different from other companies is that we do not subcontract the projects so you will continue to receive consistent quality and deliverables from coast to coast.

About the Author

David Weszely is the Safety and Training Manager at Lewellyn Technology and has been with the company for 5 years. He provides vision, leadership, safety training, and technical expertise in areas of workplace safety including electrical safety program development. He also advises management on loss control and risk reduction strategies.

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