Risks of Non-Compliance

In 1976 OSHA authorized the National Fire Protection Association to create a standard designed to prevent the loss of lives due to electrocution and arc flash incidents in the workplace. First published in 1979, the latest version of NFPA 70E has evolved through a series of 10 updates. A reasonable person may conclude that a consensus standard developed over 35 years ago, that specifically outlines procedures designed by industry experts to eliminate arc flash related deaths, would be embraced by industry. Sadly, this is not the case based on the total number of Arc Flash deaths and serious workplace injuries that continue today to plague the U.S. workplace.

The U.S. Department of Labor estimates that over 400 fatalities and nearly 10,000 serious injuries occur each year due to Arc Flash related incidents, with industry experts estimating even higher numbers. These frightening statistics equate to an Arc Flash related incident occurring up to 10 times a day, and at least one worker losing their life, every day in the U.S. Failure to comply with the logical and proven requirements of NFPA 70E continues to be the root cause of these preventable deaths and injuries. In addition, inadvertent contact with energized components continues to be the 4th leading cause of death in construction, representing 9% of all construction related fatalities.

With approximately 400 deaths occurring annually, on the surface it may appear that the 10,000 injured workers, or survivors of arc flash incidents, are the "lucky ones". Few would argue, however that living with permanent disabilities, scarring and disfigurement, loss of limbs, blindness, hearing loss and diminished "quality of life", defines lucky.

Most would agree that the statistics outlined above are completely unacceptable, especially with the knowledge that proven preventive measures have been published for over 30 years. But the question must be asked..."Why do arc flash incidents continue to occur?"

With most arc flash post incident investigations identifying "failure to understand, train, implement, comply with and/or enforce the safe work procedures detailed in JWR Construction has been selected as Construction Manager at Risk by Catholic Health Services (CHS) for pre-construction/construction services for the ground up construction of a four story, 150,000 sq ft independent living "Main" building and a 3 story, 30,000 SF assisted living building "The Inn" in Miramar. JWR was selected for this project due to their 15 year relationship working with CHS and the Archdiocese of Miami and our extensive experience in Senior Care/ Elderly Housing. This project is currently in preconstruction and construction will commence in 2015.

Link Construction Group recently broke ground on Atlantic I Pacific Companies' (AIP) new 199,581 sq ft Seventh Avenue Transit Village at 6175 NW 6th Court spanning an entire city block in the heart of Liberty City. The project is scheduled to open in the third quarter of 2015. The 9-story, 76-apartment units building will include approximately 152 parking spaces in a structured parking facility. The project will also be a transit village hub to include 5 bus-bays, and office space for Miami-Dade Transit as well as retail spaces. The project will also contain 22,278-sq ft state of the art Community Theater.

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Ethics, Quality and Professionalism

Each month Construction FOCUS features a CASF member company, selected by drawing a business card from among those attending the monthly networking breakfast. The next breakfast, sponsored by Kaufman Lynn construction, will be held on Thursday, August 21, 7:30 a.m. at the West Palm Beach Marriott - W. Palm Beach off Okeechobee Blvd.

Premier Stoneworks, founded in October 2010 by Gary Arkin, is a leading manufacturer/supplier and subcontractor of architectural masonry finishes including cast stone and GFRC products, natural stone, synthetic stone and glass block. Premier Stoneworks has a proven track record for completion of complex projects on schedule and within budget, with an impressive list of completed projects in commercial, residential and restoration markets.

Premier Stoneworks has 42 employees. Some of the key people of the company include: Gary Arkin, Owner & President; Jennifer Torres, Controller; Jose Melendez, Chief Estimator; Phil Paul, Project Manager; Gosia Gajownik, Director of Business Development; Glenn Savell, Director of Installation and Danny Green, Director of Manufacturing. Services provided include manufacturing and subcontracting of architectural cast stone, supply and installation of architectural natural stone, manufactured stone and glass block. Premier Stoneworks also has a division that focuses on the restoration of existing and aged cast stone.

The company's philosophy according to Gary Arkin, (CEO) is "Integrity and complete customer satisfaction is the driver of repeat and referral business. With that foundation we have created a business based upon ethics, quality and professionalism." The top qualities incorporated at Premier Stoneworks include people, integrity and excellence.

Gary elaborates by stating, "Everything is done by the highly valued members of our family. Issues come and go, but how we address the issues is what keeps our customers and employees loyal. From excellence comes our reputation for the highest level of quality and professionalism in our trade."

There are a couple of factors that makes Premiere Stoneworks different from other businesses. The first is having unparalleled personnel, every key position at Premier is staffed by a highly respected industry veteran. Also, Premier Stoneworks is the only subcontractor that provides supervision for its own workforce rather than shifting this responsibility to the supervisory staff of their customers. Some of Premier Stoneworks future projects include: Facchina Construction - Grove at Grand Bay, Suffolk Construction - Sinai Residences, Coastal Construction - Mansions at Aqualina.

Premier Stoneworks joined CASF in 2010. As stated by Gary Arkin, (CEO) "CASF has provided a critical networking platform for our company. Networking breakfasts and other opportunities for forging relationships have allowed Premier Stoneworks to establish a reliable credibility base with our most important segment of customers." Premier Stoneworks future projects include: Facchina Construction - Grove at Grand Bay, Suffolk Construction - Sinai Residences, Coastal Construction - Mansions at Aqualina.

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70E” as the leading cause, the answer would appear to be pretty simple. However, based on this safety professional’s personal experience auditing both large and small facilities across the U.S., compliance with NFPA 70E is too often found to be unimplemented (unaware of the requirements), misinterpreted (we are trained professionals, that doesn't apply to us, right?), or just plain ignored (we don't have the staff or time to implement it, but we are careful!).

The real question to ask is, “What can I do to help prevent even one of the 200 deaths that statistically will occur over the next 6 months?” Since you are reading this article and are now aware of the dire results from non-compliance to 70E, here are a few questions that you can ask, and/or observations you can make, that may possibly save a life in your facility:

1) Ask your facilities management or safety personnel for a copy of your Electrical Safety Program. If they don't have one, give them a copy of this article as a starter and strongly encourage them to seek the services of a safety professional or compliance consultant with documented 70E expertise.

2) Take a walk around your facility and look at the covers/doors of your electrical distribution systems to see if they are properly labeled with arc flash warning and safety requirements. The following information is required to be included on a label, per 70E:

   a. Available Incident Energy in Calories/Cm2 and the working distance
   b. Minimum arc rating of clothing
   c. Required level of PPE
   d. Highest hazard/risk category (HRC) for that equipment

(2) Applicable nominal system voltage
(3) Applicable arc flash boundaries

If there are no labels, you are not in compliance. Give a copy of this to your facilities management as a starting point.

3) Ask your facilities technician or electrician if they have had formal 70E arc flash training. If not, give them a copy of this article and ask them to speak to their supervisor.

It is very important to understand that even with proper safe guards in place, such as the detailed requirements in 70E, energized electrical work always puts workers at some level of risk. Arc Flash PPE and safety controls are designed to limit the destructive impact of an arc flash incident. However, employees can still be injured while wearing all the required PPE.

There are 3 primary hazards associated with an arc flash incident, which are Thermal Burns, a High Pressure Wave and the release of Molten Metal Droplets. Individually, each of these hazards poses a serious threat to employees performing energized electrical work. Now, imagine how dangerous a real arc flash incident is, as each of these hazards occurs simultaneously during an arc flash incident. The decision to perform energized electrical work must always be the last option, with the first option being all electrical work performed in an de-energized state. In today's workplace, most safety conscious companies utilize a policy that requires executive management to approve all energized electrical work, placing the responsibility for such a critical decision at the appropriate level in an organization.

NFPA 70E provides industry proven safety systems and processes that help companies protect their employees from arc flash hazards. Though OSHA does not dictate the use of NFPA 70E specifically, it does require employers to use industry standards and practices that will protect their workforce from harm, and NFPA 70E is recognized as the reference document for workplace electrical safety.

By taking the time to understand, train, implement and enforce the requirements of NFPA 70E in the workplace, we can all help protect our most valuable asset, our employees.

About the Author:
Steve Bowers, CSP, CET, is the Principle Consultant for Global Safety Management Consultants who specialize in enabling cultural change across all industries and workplaces. Mr. Bowers has over 35 years of EHS experience in the Petrochemical, Manufacturing and Construction industries and is a content expert and founding member of ClickSafety.com.
2014 Safety Forum & Awards Luncheon  
Friday, June 27 at Hugh’s Culinary

2014 CASF Safety Professional of the Year Award Winners (l to r): David Lockhart, Poole & Kent; Chris Diaz, Balfour Beatty Constr.; Brian Trusky, Moss and Ricky Rivera, Lotspeich Co. of FL.