

## **“A Report on the January 2011 IEEE Electrical Safety Workshop”**

This report is to offer a list of items from five NETA Members that attended the Electrical Safety Workshop (ESW) in Toronto this year. **These are safety ideas that each of us learned and made a commitment to bring back to our respective workplace.** The five of us agreed that the workshop provided us with invaluable information to make our workplace safer. The experts and not so experts (just working folks like most of us) provided information and an environment where you couldn't help but learn about specific techniques and methods that each of us can use. In addition there was much information provided to clarify existing codes, standards, rules, regulations, etc, etc and to tell us about new ones coming up!! This part can easily be overwhelming, but, as we all know, we must give our best efforts to keep in compliance and use the excellent information provided.

The five of us have two goals in offering this article.

1. We hope there is a safety item here that you will read and you will use to improve safety in **your** workplace.
2. Just as important, we hope to inspire you to attend the IEEE Electrical Safety Workshop in Daytona Beach, Florida next January.

Gary Donner, IEEE Fellow, long time attendee of the ESW workshop and major contributor to the IEEE Petroleum and Chemical Industry Committee (PCIC) has this to share.

Gary says, "The IEEE ESW was started by the IEEE PCIC Safety Committee in 1992 as a forum to exchange ideas and practices to increase electrical safety in the petroleum industry. Throughout the years, the attendees have expanded to cover all users of electricity. This year's conference held in Toronto, Canada, had the widest range of industries ever represented. They ranged from the oil industry to mining and electric utilities who are exempt from NFPA 70E but have adopted it anyway because it is the correct thing to do."

Here are Gary's learning experiences.

1. The idea that the mining industry and utilities have exceeded what the law requires inspires me to realize that we can take our old culture and transform it to a new culture.
2. Learning that many see the value of NFPA 70E and that in spite of some of the problems with 70E we can all learn from it.
3. A very practical screening tool was explained in one of the workshops. It was an ultrasonic hand-held instrument that can scan enclosed electrical apparatus prior to opening the door. This method can detect arcing, tracking and corona in low and high voltages. By detecting one of these problems you may decide to shut the equipment down prior to opening the door. The life you save might be yours. We are going to purchase several more of these instruments and incorporate their use in our procedures.

Kerry Heid, Owner of Magna Electric Canada, Member of Canada's Safety Standard C462, and one of the Panel speakers at this year's conference has this to share,

1. Each year safety awareness gets much higher. That's good. There are still some people that need to get involved. Small contractors seem to be an area where there is a huge gap.

2. Let's start putting NFPA 70E and CSA Z462 into school curriculum and start to enable the new entries into the electrical workforce to be on the cutting edge of safety. Most schools say it's up to the employers but let's make that change now.
3. Hazard VS risk are 2 entirely different things and many people don't understand it. Eliminate, control, protect. PPE is the last solution. It's like driving your car without any driver training or any concern for the road signs because "I have an airbag".
4. Maintenance is the trump card. All bets are off if it doesn't work the way it was designed. Equipment condition needs to be formally written into the risk assessment process.
5. Canada or Daytona in February. Hmmmmmmm
6. Old guys hide their own Easter eggs.

Jim White, Safety Director of Shermco Industries, Member of NFPA 70E committee, Past President of the 2008 IEEE ESW conference has this to share;

1. Electrical safety is a never-ending learning experience. If you know all there is to know about it, that just means you've decided to stop learning.
2. We really don't understand the phenomenon of electrical arc flash as well as we think. At this year's ESW there were a couple papers that made that clear.
3. A person can only accomplish so much on his/her own. By interacting with the other attendees at the ESW and similar venues that same person will have much more than their own experience to draw on. This can provide new ideas on how to address old problems and increase a person's awareness to problems they may have been overlooking.
4. Just because you cut corners and did not immediately die does not mean that it is now the right way to do things.
5. This year's expo highlighted a number of new technologies and equipment that can reduce hazards from doing electrical work. If you weren't there to see them, too bad – so sad.
6. Old guys rule.

Dennis Green, Safety director of Tony Demaria Electric, graduate IBEW Apprenticeship Program with many years of hands on field experience;

I learned that:

1. We are not the only company struggling with the problem of changing human behavior, as presented in the paper titled, "A Serious Near Miss". To me, the near miss incident in the paper was caused by look-alike equipment. I believe that look-alike equipment can be a killer and needs to be taken extremely seriously. In this case, it was luck that no one was hurt.
2. We should be sending anyone that receives an electrical shock to the doctor to be checked out. Dr. Joel spoke about the invisible injury which is a great name since electricity is invisible.
3. As an industry, we still blindly put men in places that they have no business being in. Why have PPE that has a breakout value of 50%, why not go for the 100%? That's how I see it when they talk about the breakout value on arc rated PPE.
4. It is a sloooooow road to get the customer, the engineer and some contractors to start pushing arc rated equipment, remote racking and remote switching. It shows that the mentality of the industry is far behind and that education, regulations, policy and

procedures still need to change. Until people are educated on the fact that these changes are for the better, will keep people alive and lower their exposure, no changes will occur.

5. I found that many companies have problems with bidding procedures . When awarding bids without understanding what the risk and hazards are, workers will continue to be hurt or killed. A bid should be awarded based on, #1 Safety records, #2 qualifications and experience and #3 the dollar amount. What is not understood is that the lowest bid is not always the best bid. Make sure your contractors are qualified to do what they say they can do.

Anthony Demaria, Owner Tony Demaria Electric, NETA Safety Chairman has this to share;

1. The goal of Electrical Workplace Safety is clear... no injuries. The path to get there is very difficult, expensive, time consuming and frequently confusing. No field worker can turn difficult and confusing information into safe work practices. Our job is to make clear, concise and consistent safety policies and procedures. It is hard to make difficult things simple. I am going to do my best to have clear policies at our workplace.
2. You can have the best safety policies and procedures in the universe. You can have the most extensive safety training program in the country. If you are not field verifying that the workers are following the policies and procedures, you do not have a safety program. I am assigning one of our top technicians to a full time safety position at our company to field verify compliance with safety policies and procedures. This person will report to our company's Safety Committee which includes top management. Their findings will be incorporated into our never ending commitment to improve our safety policies and procedures.
3. There is much disagreement and much confusion as to the definitions and differences between the words hazard and risk. Until we come to an industry-wide agreement as to the definitions of these words, we will have a serious gap in our understanding of how to communicate safety to each other.

Conclusion: Safety is a journey not an end. None of us can do everything but each of us can do something to make a difference.