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Safety Discussion – Electrical Safety



This quarter's safety discussion focuses on electrical safety. All trades face electrical hazards on the job site. More than half of the electrocutions of electrical workers are caused by direct or indirect contact with live electrical equipment and wiring (including light fixtures, circuit breakers, control panels, junction boxes, and transformers). For non-electrical workers, the main

cause of electrocution is contact with overhead power lines. These deaths are the result of failure to de-energize or protect the power lines and failure to maintain minimum clearance distances from power lines. Over a ten year period, the US Department of Labor reported the following number of fatalities by trade on US jobs sites:

Electrical workers	586	34%
Construction laborers	274	16%
Carpenters	97	6%
Non-electrical supervisors	86	5%
Roofers	72	4%
Other trades	600	35%



The OSHA electrical standards can be found online at www.osha.gov

Large Loss Review – Electrocution

A construction worker was electrocuted and two others were seriously injured on a Texas construction site in February of this year. Peter, a 31 year old concrete worker, was pronounced dead at the scene. His co-workers, Edward, 28, and Steven, 25, were both rushed to a nearby hospital and treated for severe burns and internal injuries that resulted from the electrical shocks they received.

The company that employed the workers were contracted to pour a concrete floor on a new three-story building. At the time of the accident, Peter was at ground level handing 10 foot lengths of rebar to workers on the 2nd floor. One of the pieces of rebar began to tip and made contact with a temporary overhead power line that was sagging. When it made contact, Peter was electrocuted and fell to the ground. The rebar remained in contact with the power line and Peter's body. Co-workers rushed to help and sustained electrical shocks when they tried to lift the rebar from Peter's body. Co-workers reported that the temporary power lines had previously been struck by a piece of construction equipment, causing them to sag to a height of less than 10 feet above the ground. They also reported that they had been given no training on the hazards associated with working around live power lines or the methods to control those hazards.

Peter died at a very young age, leaving behind a wife and young son. Edward and Steven survived, but spent months in the burn ward at the hospital undergoing skin grafts and other surgeries. All of their suffering could have been prevented if they had been properly trained to recognize the extreme danger of working too close to live overhead power lines.

Tool Box Meeting – Electrical Safety On The Job Site

Electrocution is the #2 killer of construction workers. Injuries received from electrical shocks include severe burns, both internal and external, as well as damage to internal organs. Let's take 10 or 15 minutes to review a few of the job site electrical safety rules. Ask your crew the following questions to review their electrical safety awareness (answers on last page).



1. Overhead power lines are generally insulated and can be touched safely. True or false?
2. Working on live electrical equipment is allowed as long as you use insulated tools. True or false?
3. 120 volt circuits are relatively safe because the amperage (current) is very low. True or false?
4. Ground fault circuit interrupters (GFCI) are one of the best ways to protect oneself from shocks when using 120 volt tools and equipment. True or false?
5. Cuts in extension cords that expose current carrying conductors can be repaired with electrical tape. True or false?
6. A Class C hard hat provides protection for your head from electrical current. True or false.
7. The electrical subcontractor on your job site is the best person to ask if the overhead power lines have been de-energized. True or false?
8. If you touch a piece of construction equipment that is in contact with overhead power lines you may be killed. True or false?
9. It is OK to use metal knock out boxes and Romex to build your own extension cords. True or false?
10. Electrical tools should only be repaired by a competent or qualified person. True or false?
11. The circuit breakers in the temporary electrical panel will adequately protect you from electrical shocks. True or false?

Looking for some free safety meeting topics?

www.toolboxtopics.com/

OSHA Speak – First Competent, now Qualified?

In the 1st Quarter 2010 Newsletter we reviewed OSHA's definition of Competent Person. If you don't remember it, here it is again. OSHA defines a Competent Person as "...one who is capable of identifying existing and predictable conditions in the surroundings and work areas which are unsanitary, hazardous, or dangerous and who has authorization to take prompt corrective action"

If you read OSHA standards long enough you will come across another term - "Qualified Person". So who is this guy? OSHA defines a Qualified Person as "...someone who, by possession of a recognized degree, certificate or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project." Typically this is someone with a college degree or other advanced training. Qualified persons designed the electrical tools and equipment you use every day on the job site.

Speaking of training.... During the first quarter of the year our General Casualty loss control staff has presented construction safety and health training sessions to almost 1,000 construction workers! Our most frequently requested training courses have been the OSHA 10 Hour Construction Safety and Health Course and Excavation Safety.

Safety Products – Electrical

Don't get shocked or electrocuted. There are products to help protect you from electrical hazards on the job site.

www.ericson.com
www.whsalisbury.com
www.idealindustries.com



The To Do List

Throughout the year we often have great ideas about how to get organized, how to work more safely, or how to reduce our exposure to loss. We might write a note to ourselves and put it in our in-box or on a Post-It note on our computer monitor. Here are some loss reduction suggestions for your in-box that will help you manage your exposures.

April 2010

- If you provided your workers with safety and health training over the winter be sure to document, document, document! The training you provided will help protect your workers from hazards. Protect your organization from OSHA compliance problems by properly documenting your safety and health training efforts.
- Hopefully the snow has melted in your parking lot, equipment yard, and around your buildings. Take a walk around the outside of your property and look for damage, accumulated debris, pot holes, and cracked sidewalks. It's time for spring cleaning inside and out. You certainly don't want your best customer tripping and falling on some loose gravel in your parking lot.
- Let's head back out to the shop again this month. Time to inspect and test all your electrical tools and equipment. Have a competent person do a complete inspection and testing of all your electrical tools, cord sets, ground fault circuit interrupters, pumps, generators, construction lights, blowers, fans, and anything else you plug in. Remember, electrocution is the #2 killer of construction workers.



May 2010

- Still trying to get your safety program off the ground? Want some free help? Colleges and universities that offer courses in occupational safety and health often require students to do internships prior to graduation. That's correct, you can get a young college trained mind to help you with your safety to-do list.
- Start the construction season off with a new safety activity aimed at identifying job site hazards and solutions to control them. A couple of methods to accomplish this might be: 1) Develop a job site inspection checklist and make monthly unannounced visits to the work sites (bring the company owner along for fun). 2) Establish a suggestion box where workers can anonymously notify you of unsafe acts or unsafe conditions. 3) Create a bulletin board in the shop or office and post hazards that were discovered and then reduced or eliminated.
- We all work hard to prevent worker injuries, however sometimes they still occur. Getting an injured worker back on the job as soon as possible can save your company money by reducing insurance premiums and out-of-pocket indirect expenses. The first step in bringing an injured worker back on light or restricted duty is to have written job descriptions ready to discuss with the worker, claim adjuster, and doctor. Take some time this month to identify and document light duty jobs that are productive and beneficial to the worker's recovery.

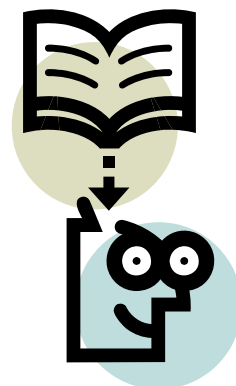
June 2010

- No chance of ice this month! If your building has an automatic sprinkler system, now would be a great time of year to flow some water and test it. Conduct an Inspectors Test to verify there are no obstructions in the sprinkler piping and that alarm signals are properly sent to, and received by, your security monitoring service.
- Minor cuts and abrasions that are not properly attended to can become infected and result in pain, expenses, and lost time. Ask your supervisors to take a quick look at their first aid kits to be sure they are properly stocked.
- Half the year is gone already. Take some time and review the accidents that have occurred so far. Look for trends, employees with multiple accidents, and most important, the causes. Make sure corrective action has been taken to prevent re-occurrences.

Let's get all these in the out-box before next quarter.

Construction Safety and Health Training Resources

Many standards promulgated by the Occupational Safety and Health Administration (OSHA) explicitly require the employer to train employees in the safety and health aspects of their jobs. Other OSHA standards make it the employer's responsibility to limit certain job assignments to employees who are "certified," "competent," or "qualified"-meaning that they have had special previous training, in or out of the workplace. The term "designated" personnel means selected or assigned by the employer or the employer's representative as being qualified to perform specific duties. These requirements reflect OSHA's belief that training is an essential part of every employer's safety and health program for protecting workers from injuries and illnesses. Listed below are a few national construction safety resources that may be able to assist with your training needs.



Associated General Contractors (AGC) www.agc.org
Associated Builders and Contractors (ABC) www.abc.org
The Construction Safety Council www.buildsafe.org
National Safety Council www.nsc.org
Occupational Safety and Health Administration www.osha.gov
Mine Safety and Health Administration www.msha.gov
National Utility Contractors Association www.nuca.com
American Society of Safety Engineers www.asse.org
Center for Protection of Workers Rights www.cpwr.com
American Trainco www.americantrainco.com
Safeway Scaffolds www.safway.com
The Crane Institute of America www.craneinstitute.com
American Work Platform Training www.awpt.org
The National Work Zone Safety Clearinghouse www.workzonesafety.org
Federal Department of Transportation MUTCD www.mutcd.fhwa.dot.gov
General Casualty Insurance www.generalcasualty.com

Tool Box Meeting (answers) – Electrical Safety On The Job Site

Answers for tool box meeting on page 2.

1. False. Power lines may have a coating to protect them from the elements, but they are not insulated.
2. False. Circuits and equipment should be de-energized, locked out, and tested before working on them.
3. False. 120 volts circuits may carry 15 or 20 amps of current. It only takes about 30 milliamps (.03 amps) of current to severely injure or kill you.
4. True. GFCI's will protect you from dangerous ground faults. They will trip in 1/40th of a second when they detect a loss of 5 milliamps.
5. False. Major cuts in power cords cannot be repaired with electrical tape. The cord must be taken out of service and either replaced or repaired by a qualified person.
6. False. Only Class E and Class G hard hats provide electrical protection. Take a look at the sticker inside your hard hat to be sure you are wearing the proper hard hat for the work you are performing.
7. False. Only the power company can tell you for sure if overhead or underground power lines have been de-energized.
8. True. Touching a live piece of equipment will allow the current to pass through your body to ground. You will be severely burned and likely killed.
9. False. You should never make your own electrical extension cords. Only contractor quality, UL listed electrical tools and appliances should be allowed on the job site.
10. True. Be sure the person repairing your tools has the skills and knowledge to properly repair them.
11. False. Circuit breakers are over-current protection devices that protect tools and equipment. A 15 amp breaker trips when more than 15 amps is being drawn through it. GFCI's protect people from deadly electrical current.

It is not our intention that this newsletter cover the requirements of the Federal Occupational Safety and Health Act or any other Safety or Health Act, or to infer or imply that there are no hazards and exposures in existence. The maintenance of safe premises, operation and equipment, and the avoidance of unsafe conditions and practices, and compliance with all statutes and laws are the sole legal responsibility of the insured. We assume no liability for the service provided. To the extent any referrals to service providers are included with this newsletter, please note that such referrals should not be construed as recommendations as we cannot provide any representation or warranties regarding work done by others. Further, we are not requiring that you use a listed service provider, you are free to choose from our referral list or another vendor to meet your needs.