

Electricity's Knockout Punch

A SAFETY TALK FOR DISCUSSION LEADERS

This safety talk is designed for discussion leaders to use in preparing safety meetings.

Set a specific time and date for your safety meeting. Publicize your meeting so everyone involved will be sure to attend.

Review this safety talk before the meeting and become familiar with its content. Make notes about the points made in this talk that pertain to your workplace. You should be able to present the material in your own words and lead the discussion without reading it.

Seating space is not absolutely necessary, but arrangements should be made so that those attending can easily see and hear the presentation.

Collect whatever materials and props you will need ahead of time. Try to use equipment in your workplace to demonstrate your points.

DURING THE MEETING

Give the safety talk in your own words. Use the printed talk merely as a guide.

The purpose of a safety meeting is to initiate discussion of safety problems and provide solutions to those problems. Encourage employees to discuss hazards or potential hazards they encounter on the job. Ask them to suggest ways to improve safety in their area.

Don't let the meeting turn into a gripe session about unrelated topics. As discussion leader, it's your job to make sure the topic is safety. Discussing other topics wastes time and can ruin the effectiveness of your safety meeting.

At the end of the meeting, ask employees to sign a sheet on the back of this talk as a record that they attended the safety meeting. Keep this talk on file for your records.

Electricity's Knockout Punch

Muhammed Ali, Rocky Marciano, Floyd Patterson and others all put their share of opponents on the canvas. They were out for the count. But the jolt in those fighters' fights was not as deadly as the punch that electricity packs.

Electrical shock kills and injures hundreds of Ohio's workers each year. Most of these accidents happen because people don't look, don't think or just don't understand the shocking power of electricity.

NOTE TO DISCUSSION LEADER:

Use an example from your workplace if you have one.

A good example is the case of an electrical maintenance employee assigned to do repair work on lightning damage to some 6,000-volt lightning arresters and to clean off insulators in transformer bays that were de-energized. The bays were fed by three transformers at the primary substation; only two of the transformers had been de-energized. One of the transformers, which we will call the south transformer, was not de-energized. This transformer fed the first five bays and #6, which was a tie switch.

The employee started to clean insulators on hot instead of cold #7. He then decided to check the voltage on before proceeding. He used a voltmeter with a maximum rating of 1,200V AC on the #6 tie switch, which was carrying 4,160 volts. When he put the meter lead wires across phase, it was the same as a short circuit. This caused the meter, tie-switch insulators and standoff insulators to explode or blow out. It also blew three main 69,000-volt fuses on the primary side of the south transformer. The employee was thrown clear of the transformer and received severe flash burns on his hands, arms and the top of his head. He was transported to the plant dispensary and attended to by the plant physician. His condition was later reported as fair to good.

The lesson to learn from this example is that the employee should have had better communication with his supervisor prior to entering the substation so he would know which transformers were energized and which were not. He would have also known what the voltages were. He later admitted he did not know the voltages, even though he had several years of electrical experience.

You need to develop good habits at work, such as tagging and locking out switch boxes, and never working alone on high-voltage lines and equipment.

You also must develop safe habits off the job. Occasionally you will read a newspaper article about someone who was electrocuted when working on a television or CB antenna that came into contact with power lines. You should leave this type of work to the experts.

Fires can start from an over-fused, overloaded circuit or from a frayed or overloaded extension or zip cord.

Another source of potential danger is using electrical appliances in wet environments. These appliances should be kept away from sinks; electrical cords should not be allowed to drape across sinks. Extreme caution should be taken when using electrical appliances in the bathroom. A hand-held electric hair dryer that is dropped into an occupied bathtub could have fatal results. In all cases, floors and hands should be dry before attempting to plug in or unplug any home appliance.

NEVER use water to put out an electrical fire; water can cause a fatal shock.

Use a Class C-rated fire extinguisher for electrical fires; shut off the source of power as quickly as possible.

We can reduce the risk of accidents in our workplace by keeping in mind these sound guidelines:

- Keep all objects at least 10 feet away from power lines.
- Don't guess. Consider all overhead lines dangerous.
- Inspect the area you're working in for electrical hazards.
- Don't overload circuits.
- Keep electrical equipment away from water and dampness.
- Be sure electrical equipment is properly grounded.
- Check all electrical cords before, during and after each use for fraying and other signs of wear and defects.
- Be sure to tag out and lock out switches when working on equipment.

Remember, electricity can be an ally or your enemy. Treat it with respect and it will provide the service you expect. If you don't, it could be a "shocking experience."