

Toolbox Talks 2

090: Unsafe Conditions: Hazardous Locations

Discussion leader duties for this session:

Review NEC Article 500.

What this Safety Talk covers:

This Safety Talk addresses unsafe conditions in Hazardous Locations.

Discussion notes:

Unsafe conditions in hazardous locations

- Undetermined Class. If a location contains ignition sources, it must be a Class I, Class II, or Class III location per NEC Article 500. You have to know the Class to know whether you can install a particular item of equipment there, and which Chapter 5 Articles apply.
- Undetermined Division. Find out if the ignition source is present during normal operation (Division 1) or during abnormal operation (Division 2). The reasons are the same as for the Class.
- Poor access control. Exactly what control is required depends on the degree of danger present. The higher the degree of danger, the more tightly access should be monitored, logged, and controlled. If the controls seem inadequate, discuss this with your foreman.
- Emergency exit path compromised. Before starting work in a Hazardous Location, check for egress. The exit path should be clearly marked and not blocked by equipment or materials.
- Metal parts are unbonded. If a ground rod or other earth connection serves as the bonding means, the difference of potential can result in a flash or spark.
- MSDS for ignitable chemicals not being followed. Such disregard for safety might not be intentional, but it does put everyone in danger. Alert the offender immediately. If that person continues to violate the MSDS, leave the area. Report any violations to the nearest authority, such as an operations supervisor. Update your foreman as soon as you can.
- Violations of common sense in ignitibles area. For example, you're walking through a coal yard and another person lights up a cigarette. This act may assist with the creation of an impressive crater, but it doesn't help with safety. Don't look around for a safety person to tell the offender to stop. Do that yourself, as time may not permit any other course of action.
- Unauthorized tools in the location. If, for example, the location requires all spark-free tools, then a normal screwdriver is unsafe. If it's unattended, remove it from the area. If someone enters with such a tool, inform that person of the danger.
- Equipment not listed for the location. Don't install such equipment. Remove it from the area. If such equipment is already installed, leave the area and report this danger to your foreman.
- Deterioration evident. If you notice damaged seals, torn gaskets in explosion-proof enclosures, or other signs that maintenance is needed to restore safe conditions, report this to the area supervisor and your foreman.

Review and discussion

1. What NEC Article provides the basic information for understanding Hazardous Locations?
2. Why do you need to determine the Class and Division of a location, when ignitibles are present?

[illegible]