



055: Lightning

Myths

Lightning never strikes the same place twice. In fact, if the same conditions that caused lightning to strike the first time still exist, it is just as likely to strike again.

If you are grounded, you are protected. In fact, lightning can travel through a grounding system and still strike you.

Electricity takes the path of least resistance. In fact, electricity follows all paths presented to it. Current divides proportionately among the resistances, as stated by Kirchoff's Law.

An active lightning protection device will protect you from a lightning strike. In fact, there is no device that will protect you from lightning. All a lightning protection device or system can do is present an alternative target and shunt a strike to ground. It may not shunt all strikes, and there is no guarantee it will shunt any strike.

If lightning is far off, you don't need to worry. In fact, if you can see it, you need to worry. Lightning is a high-voltage, high-frequency phenomenon that crosses great distances across ionization trails you cannot see.

Places not to be during lightning activity:

- On scaffolding or other metal structures outdoors.
- On raised platforms, aerial lifts, roofs, or hilltops.
- On outdoor metal grating, such as that in an outdoor process structure.
- In parking lots, unless you are in a passenger automobile or truck.
- In or under trees.
- On or near railroad tracks, fences, settling tanks, settling ponds, outdoor storage tanks, silos, or cooling towers.
- In vehicles that don't have a completely metal passenger enclosure.
- Next to switchgear or at an electrical service entrance. The danger of an arc blast is high during this time.

Places to be during lightning activity:

- Inside buildings or structures that are grounded, and preferably ones with lightning protection. The larger the building, the better.
- Underground shelters, other than metal piping.
- Automobiles, buses, or other vehicles with metal tops and bodies that provide a cage around the passenger.
- Metal train cars or shipping containers, metal ships or boats.

If you see lightning and are working outdoors

Stop using power tools as soon as you can complete the task you were doing. If lightning is close, stop using the tools immediately.

Close the job down in an orderly fashion if time permits. Help coworkers complete tasks as needed.

Discussion leader duties for this session:

Read your company's policy on lightning, if they have one.

What this Safety Talk covers:

Protecting yourself from lightning on the job site.

Discussion notes :

