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Measures to ensure protection from lightning in business premises

Overview

Lightning is a powerful force in nature. In fact, a single bolt of lightning can contain up to 100 million volts of electricity. With that much power, the resulting damage can be extreme. Lightning can tear through roofs, damage property, lives, and cause fire. For a business, being forced to shut down operations for repairs and recovery as a result of lightning damage can be financially devastating. Certain commercial buildings (based on building construction requirements, location, occupancy, frequency of thunderstorms, etc.) may need lightning protection systems installed to help keep them protected.



We at Liberty Videocon General Insurance understand the importance of ensuring and maintaining protection from lightning at your business premises; and intend to suggest some effective ways to achieve the same. We hope that the measures suggested in this document will help keep your business establishment protected from lightning strikes.

Property Protection

Lightning protection systems are the modern development of the innovation pioneered by Benjamin Franklin: the lightning rod. Today, lightning protection systems are in use on thousands of buildings, homes, factories, towers, and even the space shuttle's launch pad.

Lightning Arrestors: A Lightning Protection System (LPS) is designed to protect a structure or building and contents from damage caused by the intensely high voltage currents of a lightning strike (often exceeding a 1,000,000,000 Volt Amps). Protecting the building and its contents from external electric fields by migrating that energy around the cage instead of through its contents. A lightning protection system offers a lightning strike a low resistance path to ground, where the enormous energy is then safely dispersed.

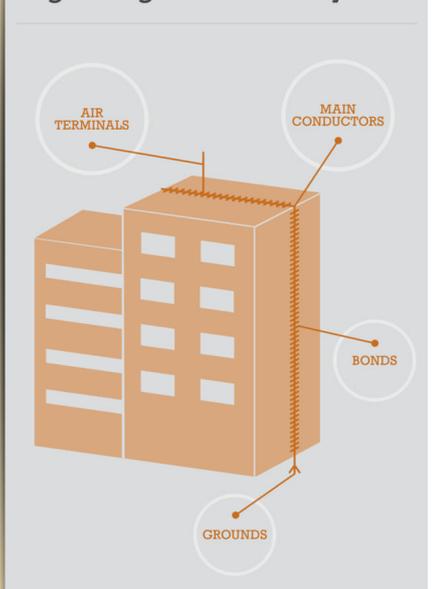
Lightning protection systems do not attract lightning; rather they provide a path of low resistance to dissipate the power of lightning strike. The experts recommend that a business's lightning protection system include the following components:

- **Air Terminals:** These rods are made of aluminum or copper and serve to intercept a lightning strike. Mount terminals evenly along your business premises's roof.

- **Grounds:** These are rods that are put into the earth around your building.
- **Main conductors:** These are braided cables that connect the air terminals to the grounds.
- **Bonds:** These are connection points between the main conductors and roof and ground points of the system. They help prevent side flashing (when lightning jumps between objects).

Proper grounding is essential for efficiently and safely dispersing the large amounts of energy from a lightning strike. Failure to provide adequate grounding will cause a lightning protection system to be ineffective resulting in property damage and risk to human life.

Lightning Protection System



Life Protection

Lightning strikes are relatively common in India during the June to October monsoon season. More than 2,500 people were killed by lightning in India in 2014, according to the National Crime Records Bureau, the most recent figures available.

What You Need to Know

- There is no safe place outside during a lightning storm.
- If you hear thunder, lightning is close enough to strike you.
- When you hear thunder, immediately move to a safe shelter:

- a substantial building with electricity or plumbing or an enclosed, metal-topped vehicle with windows up.
- Stay in the safe shelter at least 30 minutes after you hear the last sound of thunder.

Indoor Lightning Safety

- Stay off corded phones, computers and other electrical equipment that put you in direct contact with electricity.
- Avoid plumbing, including sinks, baths and taps.
- Stay away from windows and doors, and stay off porches.
- Do not lie on concrete floors, and do not lean against concrete walls.



Source: <http://www.deccanchronicle.com/nation/in-other-news/250816/lightning-kills-38-sheep-in-kanchipuram-village.html>

Outdoor Risk Reduction Tips

If you are caught outside with no safe shelter anywhere nearby the following actions may reduce your risk:

- Immediately get off elevated areas such as hills, mountain ridges or peaks
- Never lie flat on the ground
- Never shelter under an isolated tree
- Never use a cliff or rocky overhang for shelter
- Immediately get out and away from ponds, lakes and other water bodies
- Stay away from objects that conduct electricity (barbed wire fences, power lines, windmills, etc.)

Facts

Lightning is India's biggest killer and takes the most number of lives among those categorized as natural disasters. On an average the powerful bolt from the sky accounts for 2,500-3,000 lives across the country every single year.

Recent Disasters

- 59 people were killed in Bihar by a single bolt of lightning on 22nd June 2016.
- 36 people died and 37 were critically injured in several districts of Odisha on 30th July 2016. While some of the victims were working in the paddy field, others had taken shelter under trees.

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