

Webinar Title: LIGHTNING & THUNDERSTORM SAFETY: SAFETY MEASURES, PROTECTING LIVES,INSTALLATIONS,BUILDINGS OR STRUCTURES

Registration Fee (including GST):- Rs 1000/- (Rupees One thousand Only) per participant inclusive of GST

Expert Speaker (Name/ Designation) – MR. RAMNISH BEDI , DIRECTOR , KEY TO HSE AND A NATIONAL LEVEL CONSULTANT CUM TRAINER

Webinar Date: 22.08.2021 Duration: 11.00 am to 12.30 pm (one hour thirty minutes)

About Webinar (Brief One para): -

ELECTRICAL SAFETY : Electrical safety is a system of organizational measures and technical means to prevent harmful and dangerous effects on workers from electric current, electric arc, electromagnetic field and static electricity.

Electrical safety is important because hazards such as arc flash and shock can result in death if a person is exposed to it.. Electrical hazards include exposed energized parts and unguarded electrical equipment which may become energized unexpectedly. Such equipment always carries warning signs like “Shock Risk”. We should be always be observant of such signs and follow the safety rules

Lightning is a naturally occurring electrostatic discharge during which two electrically charged regions, both in the atmosphere or with one on the ground, temporarily equalize themselves, causing the instantaneous release of as much as one gigajoule of energy.

Three primary types of lightning are defined by the "starting" and "ending" points of a flash channel:

- Intra-cloud (IC) or in-cloud lightning occurs within a single thundercloud unit.
- Cloud-to-cloud (CC) or inter-cloud lightning starts and ends between two different "functional" thundercloud units.
- Cloud-to-ground (CG) lightning primarily originates in the thundercloud and terminates on an Earth surface, but may also occur in the reverse direction, that is ground to cloud.

Lightning causes thunder, a sound from the shock wave which develops as gases in the vicinity of the discharge experience a sudden increase in pressure. Lightning occurs commonly during thunderstorms as well as other types of energetic weather systems, but volcanic lightning can also occur during volcanic eruptions.

A thunderstorm is a storm with lightning and thunder. Its produced by a cumulonimbus cloud, usually producing gusty winds, heavy rain and sometimes hail. The basic ingredients used to make a thunderstorm are moisture, unstable air and lift.

A thunderstorm, also known as an electrical storm or a lightning storm, is a storm characterized by the presence of lightning and its acoustic effect on the Earth's atmosphere, known as thunder.

HIGH WINDS DURING STORMY WEATHER:

We expect high winds during stormy weather or high-profile storms like tropical storms and hurricanes. But dangerously high winds can occur even on a clear day, because the causes of windstorms all come down to temperature.

High winds can bring down power lines, cause property damage and pose life-threatening dangers to people and pets. It's important to understand the causes of windstorms, and what you can do to mitigate any damage they might create. Staying safe and minimizing wind damage is a matter of staying alert and responding quickly when high winds are present or predicted.

The webinar will focus on explaining lightning and thunderstorm safety and will discuss lightning & earthing precautions and safety measures to be taken during heavy wind /storms weather for protecting personnel , Installations , buildings or structures .

Webinar Coverage: -

- Electrical Safety
- Lightning and types of lightning
- Electrical Grounding, Types of Grounding
- Ungrounded power system Advantages, Ungrounded power system Disadvantages
- Solidly Grounded System
- Electrical Bonding, Live, Neutral, Earth & Fuses
- Protective Earth Connection(Earthing)
- Functional Earth Connection
- Electrical incidents and Preventive Measures to avoid Electrical incidents
- Earth leakage protection device
- **Understanding Lightning &Thunderstorm**
- **Type of Lightning, Effects Of Lightning Strike**
- **Accidents caused by a direct stroke when the lightning strikes**
- **Accidents caused indirectly by lightning**
- **Protection Of Structure From Lightning**
- Lightning protection systems and lightning conductors

- Types of lightning conductors
- DO'S and DON'T during thunderstorm
- Safety precautions during lightning
- Lightning and its effects and Lightning Safety Measures
- Protecting Personal & Installation from Lightning
- Lightning protection system for a building or structure
- Bonding of grounding systems and metallic services
- Maintenance of lightning protection systems
- Lightning effects by resistive coupling
- Effect of lightning strike on electrical installations
- Assessment of lightning risk, Personnel safety measures against lightning strike
- Safe locations during thunderstorms and Not-so-safe locations during thunderstorms
- Indoor activities to be avoided during thunderstorms
- High winds safety tips,Lightning Safety Tips,Outdoor Safety Tips and Indoor Safety Tips
- Case study and examples

Speaker Profile (Brief One Para & Photograph): - Mr. Ramnish Bedi is Director of KEY TO HSE consultancy and training company. He has worked as Corporate Head in reputed companies like Gates India, Schneider Electrical, RICO Auto, Delphi, Federal Mogul, Nestle & Owens Corning. He is having 25 years' of working experience in Manufacturing sector like Automobile, FMCG, engineering, Chemical & Electrical Industries. He is a certified Lead Auditor for ISO 14001: 2015 & ISO:45001: 2018 and ZED Consultant certified by QCI. He is a national level consultant com trainer in the field of quality, health, safety and environment.



Register to learn (Key Learning's' in bullet points):

- Electrical Safety
- Electrical Grounding,Types of Grounding,Electrical Bonding
- Live, Neutral, Earth & Fuses,Protective Earth Connection(Earthing)
- Functional Earth Connection
- Electrical incidents and Preventive Measures to avoid Electrical incidents
- Earth leakage protection device
- Understanding Lightning &Thunderstorm
- Type of Lightning and Effects Of Lightning Strike

- **Accidents caused by a direct stroke when the lightning strikes**
- **Accidents caused indirectly by lightning**
- **Protection Of Structure From Lightning**
- **Lightning protection systems and lightning conductors**
- **DO'S and DON'T during thunderstorm**
- **Lightning Safety Measures and Safety precautions during lightning**
- **Protecting Personal & Installation from Lightning**
- **Lightning protection system for a building or structure**
- **Bonding of grounding systems and metallic services**
- **Maintenance of lightning protection systems**
- **Lightning effects by resistive coupling**
- **Effect of lightning strike on electrical installations**
- **Personnel safety measures against lightning strike**
- **Safe locations during thunderstorms and Not-so-safe locations during thunderstorms**
- **High winds safety tips,Lightning Safety Tips,Outdoor Safety Tips,Indoor Safety Tips**
- **Case study and examples**

Date: - 22.08.2021

Time Slot: - 11.00 am to 12.30 pm (One hour thirty minutes)

Thanks and regards

S.P.Singh

Regional Director

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