

# Workshop on Electrical Safety Training in Workplace

*October 2024 (Virtual)*

*12.00 pm – 5.00 pm*

- ⊕ Online Certificate Program of 6 hours by Lead Faculties
- ⊕ E-Certificate of Participation shall be provided to all participants.
- ⊕ Course Material for future reference

## Course Coverage:

This Electrical Safety Training course will cover the major topics related to:

### **1. Fundamentals of Electrical Safety**

### **2. Electrical safety management program in PDCA framework – Risk Management**

- Electrical Hazard Identification
- Activities & situations where electrical energy may pose a risk to human
- Hazard Identification & Risk Assessment (HIRA) for electrical hazards
- Building and Life Safety

### **3. Control Measures**

- Country-specific statutory requirements – Electrical Safety Rules – Indian Electricity Rules, Central Electricity Authority Regulations, 2010, Applicable part of National Building Code, 2016 (For India)
- 20-point Good Industry Practices – Hazard mitigation procedure for different types of hazards – Earthing, Static Electricity, Arc Flash, Transformer, Power CC, Motor Control Centre (MCC), DOL Starter, Motors, Portable tools, Work Permit, LOTO, PPE, Hazard Communication etc.

### **4. Measurement & Monitoring**

- Thermography

- Periodic testing & maintenance
- Electrical Safety Self-Assessment (audit)

## 5. Qualification & Competency requirements

## 6. Case Studies of Electrical accidents

## 7. Action Plans – Pre – Incident Emergency Preparedness

### Key takeaways:

1. Fundamentals of Electricity: Basics such as current, voltage, and resistance, and the relationship between them.
2. Safe Work Practices: Procedures like lockout/tagout, safe equipment handling, and maintaining safe distances from live components.
3. Personal Protective Equipment (PPE): Selection and usage of safety gear like insulated gloves, face shields, and flame-resistant clothing.
4. Emergency Procedures: First-aid measures for electric shock victims and handling electrical fires.
5. Special Environments: Precautions to take in wet or damp locations, near flammable materials, and in confined spaces.
6. Equipment and Installation: Understanding ratings, correct installations, and regular maintenance practices.
7. New Technologies: Awareness of safety challenges posed by renewable energy systems and battery storage.
8. Regulatory Compliance: Familiarity with local and international electrical safety standards and codes.

**In essence, electrical safety training is not just a course but an essential investment in safety, prevention, and overall well-being.**

## Who this course is for

Electrical safety training is designed for a broad range of individuals, including but not limited to:

1. **Electrical Workers:** This includes electricians, electrical engineers, and linemen who directly work on electrical installations, repairs, and maintenance.
2. **Maintenance Personnel:** Those responsible for maintaining facilities, including HVAC technicians, mechanics, and other trades that might come into contact with electrical systems.
3. **Construction Workers:** Since construction sites often have exposed wiring and temporary electrical systems, it's crucial for workers to understand the associated risks.
4. **Managers and Supervisors:** Individuals in charge of work environments with electrical systems should be aware of safety protocols to ensure a safe workplace for their teams.
5. **Factory and Industrial Workers:** Many machines and tools in factories are electrically powered. Workers using or around these machines need to be aware of potential hazards.
6. **Homeowners and DIY Enthusiasts:** Basic electrical safety training can be beneficial for individuals who undertake home improvement projects or want to understand the electrical systems in their homes better.
7. **Emergency Responders:** Firefighters, paramedics, and other first responders can benefit from understanding the risks of electrical systems to safely handle emergencies involving electricity.
8. **Safety Professionals:** Individuals responsible for implementing and monitoring safety programs in various organizations need comprehensive knowledge of electrical safety.
9. **Office Workers:** In environments where there is a significant reliance on electrical equipment, such as computers, printers, and other devices, a basic understanding of electrical safety can be beneficial.

In summary, while electrical safety training is crucial for professionals directly interacting with electrical systems, a foundational understanding is beneficial for virtually everyone, given the pervasive use of electricity in modern life.

### **Speaker Profiles:**

#### **Mr. Amol A. Nikam, Asstt. Director, National Safety Council**

With 10 years of experience in the Operation & Maintenance (O&M) of electrical utility substations of various capacities, I have been extensively involved in the planning and execution of O&M activities for key equipment, including transformers, switchgears, capacitors, and bus-bars. My expertise also includes health index monitoring of transformers, ensuring optimal performance and longevity. In addition, I was Internal Auditor for ISO 9001 (Quality Management) and ISO 45001 (Occupational Health and Safety), contributing to the continual improvement and safety standards within the organizations I serve.

#### **2. Adani Electricity Mumbai Ltd**

With 5 years of experience in Testing & Protection of substations, I specialize in implementing various protection schemes and ensuring the efficient operation of battery systems, chargers, and auxiliary equipment. My role also includes calculating protection indices to optimize substation performance and reliability.

In addition to technical expertise, I have successfully implemented 5S methodologies to improve workplace organization and efficiency in substations. I am also experienced in conducting safety training sessions to promote a strong safety culture in the workplace.

#### **3. National Safety Council of India**

With 1 year of experience in safety consultancy, I have been actively involved in conducting safety audits, providing consultancy services, and delivering comprehensive safety training programs. My work focuses on identifying risks, ensuring compliance with safety standards, and promoting best practices to create safer work environments.

### **Mr. Krishna Nirmalya Sen, Head EHS, L & T Construction**

Dr Sen is basically an Engineer with over 36 years of experience in the construction industry, mostly with leadership roles in the domains of occupational safety, health, and environment. He has been associated with several large prestigious projects in India and abroad.

Apart from his senior level assignments in OSH function with a major EPC Company operating in India and abroad, he has been volunteering as President of ASSP India Chapter and Chair, Occupational Health & Safety Expert Committee of Indian Chamber of Commerce and Vice Charman of IIIE Kolkata Chapter for a few years. He has recently been appointed as "Honorary Professor at Sri Sri University, Cuttack, Odisha. He also serves as the lead tutor for "NEBOSH IGC" course and delivers IOSH "Managing Safely" course.

As a part of specialization, he obtained a Diploma in Industrial Safety from Regional Labour Institute, Advanced International Diploma in Occupational Safety and Health & Development at National Institute for Working Life, Sweden, Post Graduate course on Research in Injury Prevention and Safety Promotion at Karolinska Institutet, Sweden.

He also has obtained PG Diplomas in Training & Development and Industrial Pollution & Control and PhD from University of Petroleum and Energy Studies (UPES).

He is a Chartered Engineer and Fellow of Institution of Engineers India (FIE) as well as "Professional Engineer". He is member of several professional bodies, including National Safety Council of India and Institution of Occupational Safety and Health, UK. He is a "Fellow" of Collegium Ramazzini" based in Italy and Professional Member of American Society of Safety Professionals.

He received "Safety Award" from the Institution of Engineers (India) and Edgar Monsanto Queeny Safety Professional of the Year (2013-2014) award from American Society of Safety Engineers (ASSE). He also received the "Distinguished Service Award" from the Royal Society for the Prevention of Accidents (RoSPA).

A strong proponent of Industry-Institution partnership, Dr Sen has guided several students at Masters level and got several publications and conference proceedings in his credit. Being in leadership position, he has been contributing to nurturing and grooming many occupational health and safety professionals engaged in India and abroad.

### **Mr. Gopa Kumar S, President- National Federation of Engineers for Electrical Safety, Founder & Managing Director, Cape Electric**

S. Gopa Kumar is an Electrical engineer having 30 years of experience specialising in Safety, Standardisation and Legal Requirements of electrical installations. He is the Managing Director of M/S Cape Electric Pvt Ltd.

He has Carried out more than 1000 training and over 100 accident investigations in various Nations.

He is the President of National Federation of Engineers for Electrical Safety, a not-for-profit organisation working on electrical safety.

He is a member in the technical committees of BIS ETD 20, 30, 50, & NBC (part 8 sec 2).

He is also a member in the working groups of IEC TC64, TC81 etc

***Participation Fees:***

**Delegate Fees: 5000 + 18%GST per person**

Organizations nominating a minimum of 3 or more participants are entitled to a discount of 10% on the participation. Please make the payment using the following bank details:

Bank Name: HDFC Bank Ltd  
A/C Type : Savings  
A/C No:00141110005388  
IFSC Code: HDFC0000014

***Profile of Speakers***

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