# Module: Permit to work System

**Aim:** To know about best practice of PTW. It is a procedure designed to ensure that work is carried out in the safest possible way by considering the potential hazards and the appropriate precautions to eliminate or remove these hazards

**Objective:** At the end of the training the delegate will come to know:

- A procedure designed to ensure that work is carried out in the safest possible way by considering the potential hazards and the appropriate precautions to eliminate or remove these hazards

### Module Syllabus:

- Importance of permit to work system
- Roles and responsibilities of Requester, Issuing Authority, Performing Authority, Area Authority
- Cold work & Hot Work permits
- Work Permits and Supporting Certificates i.e. Energy Isolation, Limitation of Access Certificate, Confined Space Entry Certificate, Excavation Certificate
- Tags, Flags, Isolations and Other Procedures
- Task Risk Assessment
- Work permit process & Flowchart

# Module: Electrical Safety (Lock out and Tag out)

### Lockout/Tag out

Electrical power must be removed when electrical equipment is inspected, serviced, or repaired. To ensure the safety of personnel working with the equipment, power is removed and the equipment must be locked out and tagged out. Lockout is the process of removing the source of electrical power and installing a lock which prevents the power from being turned ON.

Tag out is the process of placing a danger tag on the source of electrical power which Indicates that the equipment may not be operated until the danger tag is removed

### Module Syllabus:

- Types of Energy
- Lockout/Tag out Procedure
- Prepare for machinery shutdown.
- Machinery or equipment isolation.
- Lockout or tag out application.
- Release of stored energy.

- Verification of equipment Isolation
- Removing Lockout/Tag out
- Authorized personnel
- Lockout/tag out kits & Danger tags & Tag ties
- Fundamentals of Electrical Hazards
- Electric shock
- Electric fire & explosion
- Electric flash & Electric burns
- Do's & Don'ts while working with Electricity

# Module: Confined space safety

**Aim:** To assist Contractors, Employers, Supervisors and Employees in establishing appropriate procedures for the Pre-Entry and Safe Execution of Entry into a Confined Space

**Objective:** Delegates will gain an understanding of:

- What is a Confined Space, Examples of Confined Spaces,
- Potential Hazards in Confined Spaces
- Pre entry planning
- Characteristics of a Confined Space
- Inspection and testing
- Hazards of confined space
- Duties of Authorized Entrants, Attendants and Entry Supervisor
- of Attendant, Entrant & Supervisor
- The Safe Work Procedure will usually consist of following three Parts
- PRE-ENTRY PLANNING (Before entry is commenced)
- ENTRY REQUIREMENTS (During entry and work activities)
- RESCUE CONSIDERATIONS (Planning for emergency situations)

### *Practical*

- Equipment Setup
- Hands on with Gas Detection
- Hands on with Breathing Apparatus
- Safe Entry Exit Procedures & Practical Rescue
- Review of risk assessment
- Completion of the Confined Space Entry Permit
- Set up and use entry/exit equipment
- Carry out rescue scenarios

### *Equipment*

- Gas Detection Monitors
- Confined Space Entry Equipment
- Breathing Apparatus – Respirators
- Contaminant Extractor

- 20 feet traverse duct for confined space

*Duration* – (04 – 08 hrs)

***Recommended Attendance*:**

This course is intended for workers who require a higher level of knowledge as well as up gradation of the confined space entry, rescue and working. Course design is intended to establish as well as improve the level of understanding and knowledge, suitable to make him/her independent for taking decisions on confined space entry, rescue and working. From this base of knowledge the candidate will be better equipped to deal with the issues of confined space.

**Note:** - We shall require General Physical Fitness Certificate

# Module: Behaviour Based Safety

**Aim:**

Behaviour-Based Safety is a process that helps employees identify and choose a safe behaviour over an unsafe one.

Safety in the workplace is a combination of three measurable components: the person, their environment, and their behaviour. Only when these three elements are combined can workplace accidents be eliminated.

**Module Syllabus**:

- Basic Behaviour Principles
- The Behaviour-Based Safety Process –
- Behavioural Observation and Feedback
- Formal Review of Observation Data
- Improvement Goals

**Results--**

- Increased efficiency
- Increased productivity
- Increased morale
- Increase profitability

# Module: Ergonomics

**Objective:** Main objectives are to:

- Create a better understanding of ergonomic principles.
- Identify symptoms and causes of discomfort.
- Guide employees through an evaluation and adjustment of their workstation.

- Outline exercises designed to reduce the risk of injury.

**Module will cover following topics**

- Definition of Ergonomics
- Fundamentals of Ergonomics
- Anthropometry & Anatomy
- Man – Machine Interaction

**Principles of Ergonomics**

- Work procedures
- Hand tools
- Work area layout
- Manual materials handling
- Seated workstation jobs
- standing workstation jobs
- Types and causes of Injury or Illness
- Work Related Musculoskeletal Disorders (WMSDs)
- Lifting The Kinetic Method
- Improper work posture, Awkward body posture/ Excessive reach
- Type of Solution i.e. Workstation Design , Component Design, Tool Design, Machinery Design,
- Productivity & Ergonomics
- Office Ergonomics

**Practical:**

- Various Ergo Exercise

# Module: Construction safety

(Welding and Cutting, use of hand and portable Power tools, use of Mechanized Equipments Lifting Machinery and Lifting Tackles. Etc.)

- Basic Tool Safety Rules
- Inspecting the tool before use
- Using guards / Properly storing the tool
- Safe handling techniques
- Welding and cutting
- Hand Tool Hazards
- Power Tools – Precautions
- Electric Tools – Good Practices
- Guarding Protection
- Pneumatic Tool Safety
- Powder-Actuated Tools - Safety Tips
- Using PPE (Personal Protective Equipment)
- General Requirements (Lifting Gear)

## Module: Emergency Planning, preparedness and Response

**Aim:** THINK, PLAN & ACT IN EMERGENCY

**Objective:** The major objective of the Plan is preservation of life, the protection of property and continuity of business operations. The overall objective is to ensure the effective management of emergency efforts involved in preparing for and responding to situations associated with emergencies

**Module Syllabus:**

- Classification of emergencies i.e. Man made & Natural emergencies.
- Importance of emergency planning
- Incident Command System
- Emergency Operations Team (EOT)
- Emergency Response Team (ERT)
- Emergency Notification Procedures
- Emergency Communications
- Emergency Tools, Equipments & Supplies
- Evacuation Procedures
- Response to specific types of emergencies like Fire, Explosion, Flood, Terrorist Attack, Hazardous Material Incidents
- Post Disaster/ Recovery operations
- Level of Emergency Response i.e. level 1, level 2 & level 3 emergencies

## Module :Compressed Gas safety (CNG etc) .

**Aim:** When working with compressed gases we need to know the properties of the gas, safe use procedures and what to do when things go wrong

**Module Syllabus**

- Hazardous Characteristics of Natural Gas
- Compressed Gas Safety Hazards
- History of CNG
- Hazardous area of CNG stations
- Gas Cylinder Safety, Safe Working with Gas Cylinders
- Cylinder Incident Response
- Main causes of Accidents
- Main Hazards
- Introduction to Natural Gas
- Safe use & handling of Natural gases
- Natural Gas Properties
- Hazards and operational tactics
- Main causes of Natural Gas Accidents
- Case studies

3G Fire Protection & Security

GULF BANGLA

# Module: Fall Protection / Work @ Heights

- Fall Protection's Role in Today's Industry
- Global Standards for Fall Protection
- Basic Fall Protection Principles
- Basic Skills in Fall Hazard Recognition & Control
- Hazard recognition (why fall protection)
- Selection & application of fall protection systems
- Hazards Associated with Fall Protection
- Rescue and Retrieval Requirements
- Selection and application of fall protection systems
- Traditional fall protection (e.g. handrails, guardrails, etc.)
- Fall arrest body holding devices
- Fall/work restraint systems
- Fall arrest anchors and anchorage systems permanent and temporary
- Fall arrest connecting means
- Rescue as a component of a comprehensive fall protection program.
- Equipment selection and inspection
- Safe Working on Roofs

## Practical

- Hands on experience with Fall Protection Systems
- Individual / group project work on Fall Protection
- Live demonstration on Fall Protection System



## Equipment

30 feet high Rig

Fall Protection in built systems

*Duration*: 1 - 2 days (08 – 16 hrs)

## *Recommended Attendance:*

This course is intended for workers who require a higher level of knowledge as well as up gradation of Fall Protection / Work @ Heights. Course design is intended to establish as well as improve the level of understanding and knowledge, suitable to make him/her independent for taking decisions on Fall Protection / Work @ Heights. From this base of knowledge the candidate will be better equipped to deal with the issues of Fall Protection / Work @ Heights.

**Note: - We shall require General Physical Fitness Certificate**

# Module : Two days Scaffolding Safety Training Module

## Day-1

### Tech. Session - I

- Introduction Scaffolding & Frame Work.
- Scaffolding & Frame Work
- Types of Scaffoldings.
- Cost, Time & Safety Management System for Scaffolding Erection.
- Method of Planning and Preparations for Erection

### Tech. Session – II

- Safe Erection Methods
- Foundations & Setting out
- Loading & Branching.
- Requirement of Safety

### Tech. Session – III

- Scaffolding Check List
- Pre Erection Check List
- Erection Check List
- Post Erection Check List
- Work at Height Check List

### Tech. Session – IV

- Tagging System
- Importance of Tagging.
- Types of Tagging.
- Authenticity for Tagging
- Tag Samples on Screen
- Care & Maintenance
- Dismantling Procedures

### Case Studies

Session Summary & Group Discussion

# Module: Two Day Programme on Electrical Safety

## Day-1

### Tech. Session - I

- Hazards of Electricity
- Major Factors Governing injury during electrical Accidents
- Earth leakage circuit breaker
- Board classification of electrical accidents
- Portable tools
- Accidents in power distribution
- Safety in Domestic use of electricity
- Major factors causing electrical accidents

### Tech. Session – II

**Static Electricity.**

- When & How? Fire triangle & explosive limits
- Conditions for static charge hazards
- Detection & measurement
- Remedial steps & control of hazards
- Earthling & bounding
- Dust explosive & vapor explosive
- Filling & emptying of - Drums, containers, vessels, storage tanks,

### Tech. Session – III

- Case studies of Electrical Accidents
- Fatal accident to fitter working on portable grinder
- Accident during MCC module maintenance.
- Fatal accident to painter on transformer painting job.
- Earthling the 6.6 KV live bus.
- Drawing out 6.6 KV breaker of running motor.
- Flash over during checking LT ACB

### Technical Session -IV

- Indian Electricity Rules 1956
- Chapters & contents
- Important & frequently referred rules
- Documents & records to be maintained.

# Module: Personal Protective Equipment

This Personal Protective Equipment Training Course is 4 hours or 1 day depending on requirements and is for all employees in the workplace who use any form of personal protective equipment to meet the current legislation under the PPE. All passing this course will receive the Personal Protective Equipment Certification

**Course content:**

- Health & Safety at Work
- PPE Risk Assessments
- Maintaining and Replacing PPE
- Information and Training
- Personal Protective Equipment Regulations
- Ergonomics and Other Considerations
- Compatibility for the Job
- Office Safety Training Course

# Module: Office Safety

This Office Safety Training Course is for all employees who work in the office and are required to meet the statutory obligations under Health & Safety at Work Act. All passing this course will receive the Health & Safety Awareness Certification.



Course content:

- Office Hazard Identification
- Personal Protective Equipment
- Loose Cables & Electricity
- COSHH
- Noise
- First Aid Display Screen Equipment
- VDU Safety
- Work Equipment
- First Aid
- Fire Safety in the Office