Best Technology Soultions **(BTS)**

Training Program

Root Cause Analysis (RCA)

Training Program

Introduction:

Most organizations have accident investigation procedures. However, these procedures are often based on a blame culture & do not inspire the investigator to ND & correct the defects in the management system (root causes) that allowed the hazards to exist & the accident to occur.

Several industries have adopted excellent accident investigation & analysis techniques. Competence in the application of modern accident/incident investigation tools will assist organizations to learn & to prevent the recurrence of accidents & to evaluate the extent & location of management defects (root-causes), which contributed to the accident event. A good analytical accident investigation is invaluable to achieve continuous improvement in an organization's HSE performance.

Who Should Attend?

Mechanical Engineers, General Supervisors, Consulting Engineers, Design Engineers, Foremen, Supervisors, Technicians, Maintenance Personnel, Engineers of all disciplines, Supervisors, Team Leaders and Professionals in Maintenance, Engineering and Production Managers, Maintenance Personnel, Heads of Maintenance and Operation, Chemical Engineers, Equipment Specialists, Technical Engineers, Operation Engineers, Planning Engineers, Process Engineers, Reliability Specialists, Boiler Plant Construction Managers, Consulting Engineers, Design Engineers, Insurance Company Inspectors, Operation, Maintenance, Inspection and Repair Managers, Supervisors and Engineers, Plant Engineers, Senior Boiler Plant Operators, Repairers and Installers, Product Engineers and Technologists, Operation, technical

service and maintenance professionals, Engineers, Consultants and Sales professionals, Technical professionals responsible for interdisciplinary energy projects, Load Lifting Engineers and Supervisors, Mobile Cranes Operators, Mobile Cranes Maintenance Engineers and Technicians, Mobile Cranes Inspectors, Load Lifting Safety Engineers and Professionals, all staff roles in engineering, technical and supporting departments with responsibility for ensuring safety in the workplace and for conducting, leading, reviewing and approving incident investigations

Course Objectives:

By the end of this course, delegates will be able to:

- Define the accident, incident event
- Understand modern accident causation theories
- Define all accident investigation and analysis stages
- Carry out initial actions in response to accident and incidents
- Gather evidence and data relevant to the accident investigation
- Effectively interview witnesses
- Analyze the role of human factors involvement in accident investigation
- Compile accident reports and remedial action plans
- Gain familiarity with modern accident analysis techniques
- The use of accident investigations as a management audit tool
- Locate and dene active human error, preconditions and root causes
- Report writing and compilation

Course Outline:

- Adopting accident prevention strategy thru risk management
- Understanding how accidents are caused
- The process & system view of accidents & accident investigations

- The need for root cause analysis
- Introductions, expectations & anticipations
- Incidents, accidents, near misses, dangerous occurrences
- Categorizing of incidents according to nature & severity
- Complying with the legal requirements for reporting & investigating accidents
- Understanding immediate, underlying & root causes & causal factors
- The four stages of an investigation process
- The various sources & categories of evidence
- Collecting & preserving evidence
- Common pitfalls in observations
- Conjuration & levels of the investigation team
- Immediate response in case of an accident
- Emergency procedures, crisis handling & loss minimization
- Taking control of the scene (immediate response)
- Elective practical interviewing tips & techniques
- Analyzing evidence & information
- Identifying immediate causes, root causes and system causes
- Using CLC charts for analysis
- Using 5-why & fish-bone techniques to re-enforce CLC analysis
- Sifting and sorting evidence & information
- Incident timeline – data mapping
- Understanding the problems using building blocks
- Identifying critical factors
- An overview of root cause elimination
- Understanding & applying the hierarchy & symmetry of controls
- Addressing the personal, job & organizational factors in the recommendations
- Overview of solution implementation
- Identifying human factors & understanding human errors
- Corrective measures, recommendations

- Developing an implementation plan & organizing for its implementation
- Report writing
- Action tracking & closure monitoring
- Trend analysis