



## **Safety Consultants & Solutions Provider**

**HSE MANAGEMENT SYSTEMS,  
FIRE SYSTEM ENGINEERING,  
& TRAINING PROPOSAL**

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## INTRODUCTION

**SAFETY CONSULTANTS & SOLUTIONS PROVIDER** is an indigenous Consultancy Company that specializes in HSE (Health, Safety and Environment), Technical Safety and Fire Systems engineering from design and specification thru implementation, commissioning and maintenance.

Incorporating accidents/hazard/fire management systems in the design and construction of buildings and production facilities is a proactive way of bringing potential risks to ALARP for people, business and the environment. It minimizes impact on project realization thus by extension a company's strategic, operation, and compliance outputs. **SAFETY CONSULTANTS & SOLUTIONS PROVIDER** is a certified Consultancy Company specializing in the design, implementation and management of safety systems. Particularly for Fire Safety Services, we represent **Tyco Safety |Systems, Control Fire, Canada and Fire & Security Techniques SA**. We provide services in all safety disciplines including:

- Oil installations HSE project management
- Fire Safety Engineering
- Technical Safety (Process Safety, Safety Reviews etc.)
- Occupational Safety & Industrial Safety & Hygiene
- Environmental Safety
- Construction Safety

We study your needs, propose and implement solutions based on findings. Our strength lies in our HR capabilities (competent certified consultants and engineers) coupled with the use of analytical, design and specification software to provide comprehensive services to clients in different economic sectors.

Our integrated approach offers all our clients competent:

### **FIRE SAFETY ENGINEERING SERVICES**

As a licensed distributor of Tyco Safety Systems, Control Fire, Canada and Fire and Security techniques, SA we can competently offer the design, specification (using licensed software), installation and maintenance services for the listed: **SAFETY SIGNAGE, DETECTION, ALARM & SUPPRESSION SYSTEMS (FM-200, NOVEC, INERGEN, FOAM, CO2, HYDRANT, SPRINKLERS, WATER MIST, ARGONITE)**

Our facilities include TWO refill rigs operating for all clean agent fire suppression most especially **FM-200, NOVEC** and **CO2**. Associated with the operation of well equipped laboratories by our partners, for **FOAM TESTING, ENVIRONMENTAL & INDUSTRIAL HYGIENE QUANTITATIVE STUDIES**, we guarantee quick turnaround of all chemical analysis including air and water sampling.

## **HSE SYSTEM MANAGEMENT**

Activities under this service include:

RISK ASSESSMENT, CONSEQUENCE ANALYSIS & SAFETY AUDITS  
JSA, HACCP, HAZID etc.  
ENVIRONMENTAL AUDITS & ENVIRONMENTAL IMPACT ASSESMENT  
HSE POLICY MANUAL DEVELOPMENT, IMPLEMENTATION & SYSTEMS  
MAINTENANCE

## **TRAINING**

FIRE PREVENTION AND CONTROL  
INDUSTRIAL SAFETY/ACCIDENT PREVENTION  
INDUSTRIAL SAFETY TRAINING WORKSHOP  
FORK-LIFT OPERATORS  
PERIODICAL EMERGENCY AND EVACUATION DRILLS

## **HSE MANAGEMENT SYSTEMS & RISK ANALYSIS**

The wisdom in seeking independent opinions to determine organizational safety requirements and performance level is invaluable both in production and ICT environments.

Successful industrial establishments therefore frequently seek the expertise of independent safety consultants using up-to-date technology and relevant software guided by experts to carry out detailed and concise hazard analysis. This ensures personnel safety, minimal downtime and prevents loss of profitability due to undesirable incidents.

These services can now be obtained locally in Nigeria from **Safety Consultants and Solutions Providers Ltd.**

HAZARD & RISK ANALYSIS and SAFETY SERVICES offered by SCSP are:

### **DEVELOPMENT OF SAFETY PHILOSOPHIES**

- Active Fire Philosophy
- Passive Fire Philosophy
- Safety Philosophy
- Security Philosophy

### **DETAILED INDUSTRIAL HAZARD / TECHNICAL ANALYSIS**

We have a team of highly experienced and trained experts who work with your team either in-house or at our facility to carry out detail hazard analysis of your processes using **PHA-Pro7** to produce the analysis listed below based on your company's needs.

- HAZOP, HACCP, LOPA, SIL, JSA studies
- EERA, HAC, SAFETY CASE, SCE etc.
- PrHA analysis
- What if analysis
- SiL analysis
- Fault Tree, Event Tree etc.
- Consequence analysis

After detailed interactive analysis, we make recommendations to clients for implementation. We have the capacity to implement proposed solutions especially in the design, supply, installation and maintenance of Clean Agent Fire Safety Systems like FM-200, CO2, FOAM and INERGEN.

### **SAFETY INSPECTION OF FACTORIES, OFFICES AND OTHER BUSINESS PREMISES**

Companies not employing full-time Safety Officers will benefit immensely from this service.

By our systematic safety inspection, we draw attention to spotted and potential hazards, offer advice on corrective and/or preventive measures that effectively ensure safety.

With these arrangements, contraventions of decrees and resultant sanctions from inspectorates and insurance companies are avoided. Safety is maintained to the benefit of the company and employees.

### **SAFETY AUDITS**

Safety audits once in a year by our experts using the software **Audit Works** will critically examine the existing safety measures, including fire fighting systems and determine whether or not they are up-to-date, effective and adequate.

Clients who have benefited from these services have found it very revealing and of great benefit.

Periodical appraisal of safety equipment and installations is vital to fire safety and prevention of other occupational accidents. Otherwise, deterioration due to unsafe acts, unsafe conditions, heat, humidity, dusts, damages, etc. would negate the systems and equipment. Nothing can be more disastrous than a reliance on false sense of safety leading to astonishing discovery at the moment of reckoning that huge investment on safety has been wasted due to avoidable defects.

## **FIRE ENGINEERING SERVICES**

SCSP offers fire engineering services to clients to design, thru construction, commission and maintenance. Safety solutions offered comply with the codes and standards stipulated by the industry and regulatory agencies. Risk assessment exercises serve as a basis for all our recommendations. Some parameters used include identifying hazards and fire scenarios, setting acceptance criteria, defining alternatives in carrying out analysis (based on a fundamental understanding of the behavior of fire and people).

SCSP provide the following fire engineering and safety services;-

**Perform detailed design, supply and installation of automated CLEAN AGENT fire fighting system, FM-200, CO<sub>2</sub>, INERGEN and FOAM.**

**Perform detailed design, supply and installation of WATER BASED fire suppression systems like Hydrant, Sprinkler, Water Mist and Hose Reel Systems.**

Conduct Fire and Explosion Risk Analysis

Develop Active and Passive Fire Philosophies

Conduct Hazardous Area Classification and EERA

Design, specified, installed and maintained fire safety systems using OEM licensed software.

Development of a safety and fire equipment database and services schedule.

Development of a philosophy and strategy for executing the services schedule including coordination with the operations and optimization to minimize the number of service trips to the platform.

Development of a services verification, compliance reporting, and certification plan and procedure

Obtaining and maintaining documented status as an Original Equipment Manufacturer (OEM) authorized service center

Obtaining and maintaining certification from relevant governmental authorities to provide services of applicable safety equipment

Provision of all tools, testing equipment, materials, and OEM spare parts to perform needed services.

Provision of competent and certified personnel to perform needed services

Have in place an adequate workshop to support all needed services

Provide all services needed in accordance to OEM recommended standards, practices, and procedures as well as international and industry standards including but not limited to:

ISO 6182-5 Fire Protection, Automatic Sprinkler Systems, Requirements and test methods for deluge valves

NFPA 10 Standard for portable fire extinguishers

NFPA 15 Standard for water spray fixed systems for fire protection

NFPA 20 Standard for the installation of stationary pumps for fire protection

NFPA 25 Standard for the inspection, testing, and maintenance of water based fire protection systems

NFPA 72 National Fire Alarm Code

NFPA 1962 Standard for the Care, Use, and Service Testing of Fire Hose Including Couplings and Nozzles

NFPA 750 Standard for the Installation of Water Mist Fire Protection Systems

## **WORKSHOP FACILITIES AND EQUIPMENT**

We have a service workshop in Lagos which is an OEM authorized inspection, repair, and certification facility for safety and fire equipment.

We operate a refill rig for the refill of CLEAN AGENT FIRE SUPPRESSION SYSTEMS including FM-200, CO2, INERGEN and FOAM. Stock of all accessory and gas is available for FM-200 systems.

At our facility, we have the software and dongles to design pre-engineered & engineered systems of all your fire safety needs using TYCO software operated by the OEM's trained engineers. **NEW TO THE MARKET IS THE MODULAR FM-200 UNITS REQUIRING NO PIPING.**

This service workshop has offices, technical library, workshop and facilities. It also has inspection tools and equipment, testing tools and equipment, common hand tools and power tools necessary for performance of necessary required services is safe and good working conditions.

This workshop facility is maintained at a high standard of safety, security and cleanliness at all times. Equipment and tools are also maintained to provide the level of performance specified by OEMs.

## **TRAINING**

We are a specialized and competent safety, security and accident prevention expert. With an average over 35 years experience, our team of specialists in fire, process, occupational, industrial and environmental safety we seek for excellence and offer dependable, realistic and effective cost saving services in these fields.

### **Training Courses/Workshop**

At this time of ever increasing and in many cases prohibitive costs of health care, labour, building materials, production materials, machinery and spares and other assets, the need for safety and security education to increase safety awareness and maintain constant vigilance against accidents, thefts, arson and other criminal acts cannot be over emphasized.

Generally, the contents of our courses from which programs are drawn to suit individual company's requirements, with appropriate touches for job responsibilities and different staff cadre are as shown below.

#### **FIRE PREVENTION AND CONTROL**

Introduction to the nature of fire

Factors essential to fire occurrence

Classification of fire

How fire spreads

Fire extinction methods

Causes of fire in offices, workshops, industrial operations and residential buildings

Fire fighting appliances: portable and mobile units

Fixed fire protection systems

Fire protection techniques

Emergency and evacuation procedures

Practical fire fighting demonstrations showing;-

Uses, operation, application methods and effectiveness of various portable fire extinguishers

Fire hose running methods and control of water jet reaction at the branch pipe

Fire ground operations;- sizing up and tactical control methods

Practical firemanship

Fire safety audit

Fire incident investigation, reporting, cause analysis, and cost evaluation methods

At the end of this course, participants would have more knowledge of;-

- How fire occurs, it's essential factors, the different classes of fires and their extinction methods

- Uses, operation, suitability and application methods for various fire fighting appliances

- Uses of hydrant and other fixed fire protection systems, including fire pumps, fixed and/or mobile

- Adverse smoke and heat conditions inherent in fire fighting and the methods of getting over the adverse conditions.

- How fire could effectively be prevented.

### **INDUSTRIAL SAFETY/ACCIDENT PREVENTION**

- Introduction to industrial safety; accident definition, and causes of accidents

- Basic principles of accident prevention; hazard spotting, hazard elimination methods, uses of safety guards, personal protective clothing and appliances, uses of safety notices and posters

- Manual and mechanical handling aids

- House keeping

- Safety in preventive maintenance

- Work permit systems

- Plant acceptance/transfer procedures

- Legal aspects of industrial safety and accident prevention

- Employee safety responsibility

- Supervisor's safety responsibility

- Management safety responsibility

- The roles of safety officer and safety committees

- Safety audit and systematic inspection procedures

- Safe handling of flammable liquids and gases

- Safe handling of toxic chemicals

- Safety regulations for contractors

The objectives of this training are;-

- To stimulate awareness and increase participants' degree of safety consciousness

- To increase participants' knowledge of the causes of accidents, improve their ability to recognize and control hazards and thus be in a better position to prevent accidents

- Every participant would have more knowledge of precautions to take to control hazards that could cause accidents in his/her job operation

Participants would have clearer knowledge of the functions of and the needs for safety guards and protective devices and thus develop more tolerance for their use and maintenance

Participants will have better understanding of the health risks and the precautions necessary for safety in working un confined spaces or chemical fumes/dusty areas

The need for safety regulations for contractors and to ensure compliance with the regulations will be recognized by participants.

### **INDUSTRIAL SAFETY TRAINING WORKSHOP**

At the end of this workshop, the participants would be able to:-

Have a quicker and clearer understanding of the needs for effective safety programs and be able to assist management in establishing or sustaining the programs

Accurately investigate, analyze and report accidents and use their findings to prevent accidents and so eliminate costs due to accidents

Carry out job safety analysis to identify inherent hazards in a job and apply suitable work methods and safeguards for eliminating such hazards

Recognize potential hazards and take preventive and/or remedial measures to ensure that safety of personnel and company property is secured

The contents of the workshop include:-

The role of full/part time safety officer

The role of supervisors and foreman/leading hands

Training of new employees

Eliminating the hazards from the job

Safety inspection procedures and checklists

Uses and maintenance of safety guards

Causes of accidents-unsafe acts and unsafe conditions

Accident reporting, investigation and analysis

Legal aspects of industrial safety

Safety audits

Fire fighting demonstration-using your equipment randomly selected to test their efficiency and to teach effectively their uses, operation and application methods

Discussion methods, syndicate work, film and practical demonstrations will be used to conduct this workshop as the workshop program is experienced based.

### **FORK-LIFT OPERATORS**

Our forklift operator's course program is designed to educate forklift drivers on safe handling of forklift trucks, with a view to enhancing their knowledge in recognizing the various causes of accidents in forklift operation and how such accident factors can be eliminated or avoided.

The training which is in two main parts, would commence with a close look at the principal parts of a forklift; explaining in details, the functions which are common to most of them. This part one would be rounded off with discussion and instructions on pre-operational checks and procedures. In part two of this course we would look at the actual driving of the truck with detailed procedural dos and don'ts for avoidance of accidents.

Finally we would in a practical demonstration operate a forklift truck to lift and carry a variety of loads at different angles; focusing attention on its rated capacity indicating:-

Maximum weight to be carried

Load centre. The distance from the heel of the forks to the centre point of the load end

Height to which the load can be safely lifted

### **Objectives**

Participants will have more knowledge of the;-

Essence of routine checks

Effects on truck stability on truck elevation and out-of-reach projections

Hazards inherent in operating forklift truck up and down slopes, over bumps, slippery surface and through bends; stressing the need to recognize that where a slope has to be negotiated, it will alter the balance of the truck

Safe methods of stacking loading and off-loading with forklifts.

This course is invaluable in cost saving efforts. It is very effective in reducing damages to the forklift truck itself and in drastically reducing, if not totally eliminating entirely, property damage and injury-accidents in forklift operations.

Course duration is two (2) days.

### **PERIODICAL EMERGENCY AND EVACUATION DRILLS**

There is hardly a week without an account of some disaster affecting life and/or property. Sometimes it is due to some natural occurrences but in most cases they are man made. In terms of consequence, the cause is unimportant; these disasters result in loss of life and damage to property.

The extent of damage depends on how well the affected persons are able to contain the emergency. The time to think out a course of action is before the emergency. The saying, "practice makes perfect" cannot be over-emphasized in procedures to mitigate emergency situations and the resultant effects.

Our emergency procedure/evacuation drill program contains a pre-drill and periodical safety talks with our client's personnel, focusing attention on;-

Evacuation point for each premises

The need for orderly evacuation, detailing out the various steps to be taken for safety in corridors and stairways.

Inherent hazards in mass evacuation and how to avoid related accidents.

Reasons for prohibiting lifts as a means of mass escape

Reliable procedure for calling the fire brigade and other essential officers and services for assistance

Adverse effects of panic and stampede during evacuation, to emphasize the need to avoid panic and stampede.

Emergency plan/evacuation drill should be carried out regularly at quarterly intervals. Where quarterly intervals are not operationally convenient, the intervals should not be longer than six months.

Regular evacuation drills conducted by us with clients' active support will provide;-

Necessary confidence and knowledge for orderly and speedy evacuation, free of injuries

Immediate firefighting effort to control and extinguish any fire outbreak before the arrival of the township fire brigade

The program also contains a requirement for selected members of clients' personnel to form a squad of fire fighters (fire Marshalls) who will be trained by us to ensure immediate fire fighting response to any fire outbreak within the clients' premises.

### **QUALIFICATIONS AND PERSONNEL**

We are an OEM authorized service agent for inspecting, maintaining, and testing safety and fire equipment. Additionally, we are also approved to inspect, maintain, and test safety and fire equipment as required by the Nigerian Maritime Authorities.

Our personnel are well trained, qualified and experienced fire and safety professionals.