

# Safety Technology & Risk Management





### Safety Technology & Risk Management

Ref: 321449\_140115 Date: 13 - 17 Jan 2025 Location: Accra1 (Ghana) Fees: 3300 Euro

#### Introduction

As technological systems become more complex it becomes increasingly difficult to identify safety hazards and to control their impact. Plant Managers and Engineers are becoming more aware that safety and risk touch on every aspect of the day to day running of their Plants and engineering and process systems if they are to comply with ever-changing and demanding International, and National environmental and economic values and standards.

Unsafe systems can result in monies being lost due to accidents, disruption to production, criminal and civil prosecutions, loss of market share, and the degradation of company assets and the environment

## Course Objectives of Safety Technology & Risk Management

- Apply the principles of hazard identification and assessment of risk to processes and machinery
- Understand reliability concept and use of failure tracing methods
- Demonstrate a practical understanding of a quantitative risk assessment technique and the date required for records
- Advise management on the most effective control methods based on the evaluation of risk
- Identify the general requirement for the development of a safe system of work
- Recognize relevant International Standards for Reliability and Machinery Safety
- Promote a proactive attitude within the individual to hazard analysis

## Course Outlines of Safety Technology & Risk Management

#### Day 1

#### **Hazard Identification**

- Why do we need safety engineering
- Examples of major disasters
- The safety system process
- Hazard identification
- Hazard control
- · Criteria for risk tolerability

Head Office: +44 7480 775 526 | 0 7401 177 335

Email: training@blackbird-training.com Website: www.blackbird-training.com





- Hazard Identification Techniques
- Design out hazards
- Safety standards codes, national and international
- Safety analysis in engineering
- Safety analysis in Chemical process
- · Safety analysis in manufacturing

#### Day 2

#### **Risk Assessment Techniques**

- Safety Management
- Safety in the system life cycle
- Hazard identification check-list
- Process, workplace, work equipment risk assessment
- Task-based risk assessment
- Introduction to HAZOP

#### Day 3

#### **Machinery and Work Equipment Safety**

- Machinery hazard identification
- Causes and methods for machinery accident prevention
- HAZOP examples
- Failure modes, human factors, and software safety
- Conducting a failure mode and effects analysis
- Human factors safety analysis
- Performance and human error
- Human factors and safety analysis

#### Day 4

#### **Reliability Technology**

- Types and causes of failures
- · Methods of preventing failure
- Types of maintenance and inspection regimes
- Reliability of components and systems
- Design and reliability of control systems
- Design and reliability of protective systems
- The concept of 'HIPS'
- Safety Integrity Levels 'SIL' selection

#### Day 5

### **Consequences Analysis**

Head Office: +44 7480 775 526 | 0 7401 177 335 Email: training@blackbird-training.com Website: www.blackbird-training.com





- Mechanics of fire, explosion, and toxic releases
- Dispersion modeling software
- Types of fire: flash, jet, cascading fires and BLEVE
- Types of explosion
- Quantification of risk
- Event Tree Analysis 'ETA'



Head Office: +44 7480 775 526 | 0 7401 177 335

Email: training@blackbird-training.com Website: www.blackbird-training.com



## Blackbird training cities

Accra1 (Ghana) Amman (Jordan) Amsterdam (Netherlands) Annecy (France) Baku (Azerbaijan) Bali (Indonesia) Bangkok (Thailand) Bangkok (Thailand) Barcelona (Spain) Batumi (Georgia) Beijing (China) Beirut (Lebanon) Berlin (Germany) Birmingham (UK) Bordeax (France) Boston, Massachusetts (USA) Brussels (Belgium) Cairo (Egypt) Cape Town (South Africa) Casablanca (Morocco)

Doha (Qatar)

Düsseldorf (Germany)

Cascais (Portugal)

Head Office: +44 7480 775 526 | 0 7401 177 335

Copenhagen (Denmark)

Email: training@blackbird-training.com Website: www.blackbird-training.com



Dubai (UAE)



## **Blackbird Training Category**



**Human Resources** 



Audit & Quality Assurance



Finance, Accounting, Budgeting



Marketing, Sales, Customer Service



Secretary & Admin



Law and Contract Management



**Project Management** 



IT & IT Engineering



Supply Chain & Logistics



Management & Leadership



Professional Skills



Oil & Gas Engineering



Health & Safety



Telecom Engineering



Hospital Management



Customs & Safety



Aviation



C-Suite Training



Agile and Refinement



Head Office: +44 7480 775 526 | 0 7401 177 335 Email: training@blackbird-training.com

Website: www.blackbird-training.com



# **Blackbird training Clients**



MANNAI Trading
Company WLL,
Oatar



Alumina Corporation **Guinea** 



Booking.com Netherlands



Oxfam GB International Organization, Yemen



Capital Markets Authority, Kuwait



Nigeria







Oatar Foundation,

Oatar



AFRICAN UNION ADVISORY BOARD ON CORRUPTION, Tanzania



Kuwait



Reserve Bank of Malawi, **Malawi** 



Central Bank of Nigeria



Ministry of Interior, KSA



Mabruk Oil Company **Libya** 



Saudi Electricity Company,



BADAN PENGELOLA KEUANGAN Haji, Indonesia



NATO **Italy** 



ENI CORPORATE UNIVERSITY, Italy



Kuwait



General Organization for Social Insurance KSA



Defence Space Administraion
Nigeria



National Industries Group (Holding), Kuwait



Hamad Medical Corporation, **Qatar** 



USAID **Pakistan** 



STC Solutions, KSA



North Oil company,



EKO Electricity



Oman Broadband



UN.





Head Office: +44 7480 775 526 | 0 7401 177 335

Email: training@blackbird-training.com Website: www.blackbird-training.com



LONDON TRAINING PROVIDER

