



Training Course :

Fire and Gas Detection and Alarm System training (FGS)

Training Course For One Week In

UAE , Dubai , Cityseason Suites Hotel

Which Be Held As Under Details :



Abar Solutions Petroleum Consultancy Invite Your Employee To Participate With Us In Special Training Course As Under Details :

Course Name		Fire and Gas Detection and Alarm System training (FGS)			
Code	Period	Language	Start	End	Location
ICT 018	5 Days	Bilingual (Arabic & English)	13/08/2017	17/08/2017	UAE , Dubai , Cityseason Suites Hotel
			03/09/2017	07/09/2017	
			08/10/2017	12/10/2017	
			12/11/2017	16/11/2017	
			10/12/2017	14/12/2017	
			14/01/2018	18/01/2018	
			11/02/2018	15/02/2018	
			11/03/2018	15/03/2018	
			15/04/2018	19/04/2018	
			20/05/2018	24/05/2018	
			10/06/2018	14/06/2018	
			22/07/2018	26/07/2018	

**** The Fees Includes : Lecturer , Training Material , Training Room With One Coffee Break Daily , Certificate Of Attendance In Last Day Training Course ****

Course Description

⇒ The concept of a Safety Instrumented Fire & Gas Systems (SI-FGS) has emerged in the process industry. Its arrival is has generated both controversy and confusion. The term SI2 of 13FGS represents the attempted application of performance based safety concepts to the design of Fire & Gas Detection Systems. ANSI / ISA S84.01 states that Fire & Gas Systems where operation action is required to initiate the system is not covered by the standard. Thus, those systems that automatically initiate an action could be addressed by the performance based Safety Instrumented System standards. However, the inherent differences between a Safety Instrumented System and a Fire & Gas System pose some challenges for an end user attempting to merge design techniques.

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- ⇒ A Safety Instrumented Fire & Gas System (SI-FGS) is a system comprised of initiating device sensors, logic solvers, final control elements, fire safety functions and / or notification appliances for the purpose of mitigating an event when predetermined conditions are violated.
- ⇒ The Fire and Gas system (FGC) is designed to give the earliest possible warning and location of:
 - A fire in its initial stage.
 - A flammable gas leakage or accumulation up to the lower explosive limit (LEL %).
 - Any toxic gas likely to be present up to the occupational exposure limits (OEL).

Course Objectives

- ⇒ **At completion of the course, the participants will be able to:**
 - Describe the main types of smoke detectors and their working principle.
 - Understand the working principle of the different types of heat detectors.
 - Describe the function of VESDA system.
 - Know the typical loop architecture of smoke/ heat detectors.
 - Describe different types of fire detectors and their principle of operation.
 - Specify appropriate type of fire detector for the service.
 - Describe the purpose of Optical Integrity “OI” optional.
 - Troubleshoot and identify problems with fire & gas monitoring systems.
 - Describe the principal of operation of Hydrocarbon Gas Detectors.
 - Describe the principal of operation of Toxic Gas Detectors

Course Content & Outlines

- ⇒ **Fire and Gas System Purposes, Architecture and brief about the Traditional and Addressable Systems.**
- ⇒ **Different types of Detectors, operation and application:**
 - Manual Call Points
 - Smoke Detectors
 - Heat Detectors
 - Infra-Red Oil Mist Detectors
 - Ultra Violet Flame Detectors

- Infra-Red Flame Detectors
- Combined Ultra Violet / Infra-Red Flame Detectors
- Flammable Gas Detectors
- Toxic Gas Detectors
- Spill detectors
- Fusible Plugs

⇒ **Detector Interface Modules**

- Fire Detectors Modules
- Flammable Gas Detectors Module
- Toxic Gas Detector Module

⇒ **Fire & Gas control panel; Electrical Operation, Control Action, Interface with DCS, PLC System, Event Logging**

⇒ **Electrical connection of detectors in a loop.**

⇒ **Fire Extinguishing Control Systems components and operation: -**

- Total Flood Systems: -
 - Discharge Solenoids
 - Mechanical Lock-Out Facility
 - Discharge Pressure Switch
 - Local Release Facility
 - Visual Warning Lamp Clusters
 - Extinguishing Discharge Audible Alarm
- General Alarms:
 - General Audible Alarms
 - General Visual Alarms
 - Gas Hazard warning Lamps
- Read and understand a fire detection and suppression system overview drawing.
- Deluge System (brief about the purpose and controls on a sample drawing)

⇒ **Typical Fire & Gas Systems**