



Training Course:

Design & Operation of a Safety Instrumented System (SIS)

Training Course For One Week In

UK - London - Marriott Hotel Kensington

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		Design & Operation of a Safety Instrumented System (SIS)				
Code	Period	Language	Start	End	Location	Fees KD
HSS 006	5 Days	English	27/08/2018	31/08/2018	UK – London - Marriott Hotel Kensington	1650
			03/09/2018	07/09/2018		
			15/10/2018	19/10/2018		
			12/11/2018	16/11/2018		
** The Fees Includes : Lecturer , Training Material , Training Room With One Coffee Break Daily , Certificate Of Attendance In Last Day Training Course **						

Introduction

Safety Instrumented Systems (SIS) by definition is the instrumentation installed in a facility for the purpose of taking the process or specific piece of equipment in the process to a safe state. The SIS is designed to respond to plant emergency situations and generate the correct output before a hazardous event takes place. The SIS requires planning and is designed to the particular characteristics of the facility. SIS is designed to integrate plant shutdown systems such as the Emergency Shutdown Devices (ESD) and Plant Shutdown Devices (PSD) systems. Once the SIS requirements are determined, the appropriate technology is chosen and the SIS is installed and tested for functionality and operability. Once the facility is operating, the SIS must be maintained and checked at regular intervals. This course has been designed to introduce participants to the design considerations and expose them to relevant information needed to properly select an SIS. Participants will also an understanding of the process involve in choosing the technology that best fits to the plant as well as installation, testing and managing of the SIS.

Course Outline

Day 1: Safety Instrumented Systems

Introductory

Design considerations

Protection layers

Safety integrity levels

On day one, participants will learn about the fundamentals of the SIS. They will be exposed to the design considerations which involve life cycle and hazard and risk analysis. They will gain knowledge in determining the protection layers which give the overall protection available from

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operating the process to emergency response. Discussions on this day also include safety integrity and the level needed to meet the possible risks in the operating environment.

Day 2 & 3: Safety Instrumented System Technology

Choosing a technology

SIS evaluation

Hardware

Control & safety systems integration

The focus of this 2 days starts with the types of SIS that are available and which one best suits specific operations. The participants will learn about the initial evaluation of the SIS once the technology has been selected and they will gain knowledge on the importance of selecting the proper hardware for the selected technology. Discussions include precautions that must be considered in the integration of the control and safety systems.

Day 4: ESD and PSD Systems

Introduction

Permissives and interlocks

ESD & PSD alarm systems

Redundancy

Testing, resetting and bypassing

On day four, participants will be made aware of the relationship between the SIS and the ESD & PSD system. They will gain knowledge in permissives and interlocks which are the logic used in ensuring the safe shutdown of a plant. They will also be made aware of the characteristics of the ESD & PSD alarms and their difference compared to non-critical alarms. The participants will gain knowledge in maintaining reliability through redundancy and procedures relating to testing, resetting and bypassing the ESD & PSD system.

Day 5: Safety Instrumented System Testing and Installation

Installing the SIS

Initial Testing

Functional Testing

SIS Checklist

Managing the SIS

The course concludes with discussions on the requirements for installing the SIS. Participants will gain knowledge in the initial factory and site testing as well as functional testing once the SIS is installed. Participants will also learn what is involved in managing the SIS during normal operation.