Training Program:

DCS System Maintenance: Re-fresh on latest DCS tech. HW, Maintenance. Procedures, SW install. Back-up procedures.

INTRODUCTION:

This Course introduces you to DCS, its general control Concept and the areas of applications in industry in which they are being applied. Distributed control refers to a system of digital instrumentation that is distributed geographically and also functionally. In the geographical context, a number of electronic assemblies are located in processing areas throughout a plant, wired to process-mounted sensors from which they receive information about the process conditions and also connected to process-regulating devices to which they send commands generated by programs that process the sensor-derived information. including its scanning method, also covered its architecture and configurations , system tag name, function blocks configuration, network and data communication , I/O modules and sub system communication also will cover The Advantages of DCS from many points of view Management Consideration, and Operator Requirement Consideration.

WHO SHOULD ATTEND?

This course is design for:

- New engineers / tech.
- Senior engineers / tech.
- Process engineers / tech.
- Instrumentation engineers / tech.
- Electrical engineers / tech.

COURSE OBJECTIVES:

- To understand the major components which make up the Systems, operation of modules, performance critical protection, basic System configuration within software, Fault Reporting, I/O Circuits employed in the system, including redundancy and fault tolerance.
- To identify, isolate and repair faults of field interfaces as well as the Controller equipment
- To understand and perform the steps necessary to initialise the system, Including power-up sequences and program loading and execution
- To perform routine maintenance operations on the system
- To be familiar with the system drawings and documentation as required to Support maintenance and troubleshooting procedures
- Be able to interpret module information, carry out module replacement and plant maintenance

COURSE OUTLINE:

1 - Introduction to process control system

- Process control by controllers
- Process control functions
- Process control systems
- Development history of control system

2 - System Overview

- DCS minimum system components
- System components
- Human Interface Station (HIS)
- Field Control Station
- Network
- System capacity

- Hardware configuration

3 - HIS Startup

- HIS Utility
- Virtual test function

4 - Engineering Environments

- Target system
- Concurrent engineering
- Engineering flow

5- Project Creation

- Types of project
- Creating a default project
- Project attribution utility

6- Defining FCS Configuration

- FCS properties
- FCS station definition
- Scan transmission definition item
- Equipment

7- Process Input/Outputs

- Creation of a new node
- IOM builder

8 - Control drawing builder

- Control drawing
- Control drawing environment
- Tool bar definition
- Registering the function block
- Control drawing wiring

9 - Regulatory control function blocks

- Functions Of The Regulatory Control Blocks
- Types Of The Regulatory Control Blocks
- Function Block Detail Specification Of PID Block
- Other Regulatory Control Function Blocks

10 - Sequence Control Function

- Types Of Sequence Control Blocks
- Sequence Table Configuration
- Logic Chart Block
- Software Input/Output

11 - Defining His Function

- His Property
- His Constants Builder
- Function Keys

12 – Scheduler

- Tasks Executable By Scheduler
- Execution Of Tasks Defined On Scheduler
- Panel Set
- Sequence Message Request

13 - Course overview

- Evaluations / Examination
- Course close out