Power Plant Troubleshooting and Engineering Problem Solving

Course general description:

Excellent Troubleshooting skills are considered a core competency for 'Best-in-Class' modern industrial companies. If your company's goals include minimizing downtime then this workshop is a must because itdelivers rapid, efficient Troubleshooting.

The following aspects will be addressed:

- Problem Solving Terminology
- Numerous Tools and Techniques
- A standard "Blue-Print" for problem analysis and resolution
- Strategies; Planning; and Protocols
- Variability Analysis
- "Human Factor" analysis as a Source of Error

Audience:

This course is designed for:

1- Electrical supervisors
2- Electrical Engineers
3- Anyone involved in the maintenance of power plants

Course objective

Participants attending the program will:

- Understand how to become a 'Top Gun' Trouble-Shooter Develop a structured approach to Troubleshooting and Problem Solving which uses a common terminology and shared understanding
- Point the way to Continuous Improvement in the way you run your processes and make incremental efficiency gains
- Understand the difference between having a techniques manual on the bookshelf – and actually making it work
- Identify the "motivated" people who should be the champions of Troubleshooting and Problem Solving – and who should just follow
- Understand work practices which "allow" success in Troubleshooting and Problem Solving

Course duration:

5 days

Course location:

Cairo-Dubai-Istanbul

Course contents:

Day-1

Introductory Concepts

- The nature of problems
- A Common Terminology
- Context – Asset based or Business Process based
- Structured approaches – 6 Big Losses, 7 Wastes
- Techniques introduction
- Tools introduction
- A Six Level Performance Standard
- Critical Relationships

Day-2

Tools & Techniques – Practical Experience

- Decision Logic
- Maturity Indexing
- Relationships Analysis
- Problem Analysis and Synthesis
- Practical Use of Tools and Techniques
- Case Studies
- Project selection methods
- Tools & Techniques – selecting the right one

Day-3

People Issues

- Working practices – empowerment or impairment?
- Group dynamics
- Individual motivators
- External vs. Internal Motivation
- Developing Troubleshooting and Problem Solving skills
- Managing change
- Transition Matrix
- Fractation

Day4

Operator, Maintainer, Designer Interface

- Cross functional working
- Effect of Maintenance strategy
- Functional Contribution analysis
- Life Cycle Analysis, Design for Operation, Design for Maintenance
- Variability Analysis
- Strategies; Planning; and Protocols
- Effect of improved "Fit" between critical parameters in Operations
- Continuous Improvement

Day-5

Open Forum

- Review of Concepts, Tools and Techniques
- Your Problems – Your Case Studies
- Your Action Plan
- Configuration Management
- Commercial Programs
- Application of "Standard Questions"
- The Four critical stages of Data Maturity
- Wrap up

Methodology:

- 50% lectures & concepts
- 10% Videos
- 10% Case studies

- 10% Exercises
- 10% Discussions
- 10% Software (if applicable or examples)

Course code: (TEEI004)