Root Cause Failure Analysis Training

Description

Introduction

The highly interactive Root Cause Failure Analysis program addresses a modern approach to problem solving in maintenance management. The program is based on some of the most recent research in the field. Participants will be enabled to improve the performance of their operation with practical, down-to-earth techniques that are based on first principles.

The following aspects will be addressed:

- Logistics of Continuous Performance Improvement
- Decision Logic and Operational Knowledge Types
- Maturity Indexing
- Relationship Development and Analysis
- Strategic Focus
- Complexity; Risk; and Variability Models

Objectives

Applying the concepts taught in this programme, the student will be able to:

- Develop and implement a sustainable world class maintenance strategy
- Perform a systematic Root Cause Failure Analysis
- Develop an improved understanding of numerous maintenance environment variables, and of the relationships between them
- Understand, audit and optimize your maintenance process
- Understand the use and application of generic problem solving techniques
- Cascade the principles and benefits of the program to other employees

The Contents

Day 1 – Problem Solving – Basic Principles

- Problem Identification Session
- Terminology of RCFA
- Decision Logic
- Three Knowledge Types
- Maintenance Maturity Indexing
- Six Level Generic Performance Standard
- Continuous Improvement
- Exercises

Day 2 – Sustainable Maintenance Performance Improvement 1

- Introduction to Modern Maintenance Practice
- The SQC Performance Model
- Reverse Risk Analysis
- Maintenance /Operations Objectives and Resource Analysis
- Complexity; Risk; and Variability Models
- The Maintenance Cost Ratio
- Solving of Delegate Problems
- Exercises

Day 3 – Sustainable Maintenance Performance Improvement 2

- Cross Referencing Operational Variables (Group Exercise)
- "Your Maintenance Costs are too High!"
- Sigma Sets: The Absolute Decision Standard
- Data / Knowledge Base
- Accuracy and Availability of Data / Cost relationship
- The Four critical stages of Data Maturity
- Logical Critical Thinking vs. Creative Lateral Divergent Thinking
- Case Studies: Analysis and Exercises

Day 4 – Root Cause Analysis

- Maintenance Strategy Development and Implementation
- Standard Pitfalls for Maintenance Improvement Initiatives
- Generic Problem Solving Techniques
- Logical Problem Solving Techniques
- Creative Problem Solving Techniques
- Other Problem Solving Techniques
- A Systematic Root Cause Failure Analysis Methodology
- Exercises

Day 5 – Action Plan Development

- Introduction to TRIZ Methodology
- Review of Most Suitable Techniques

- Development of an "Instant Approach" to Problem Solving
- Application of "Standard Questions"
- Individual Delegate Requirements
- Commercial Programs
- Logistical Requirements for Practical RCFA implementation
- RCFA Exercises (Analysis of Client Company Specific Problems)

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