

## Workshop on

# “Problem Finding and Maintenance Using Root Cause Analysis”

### 5-Days Program (Online)

## About Us

We are the training providers and deals in Technical, HSEQ, Management and Soft Skills Training.

We have highly knowledgeable and experienced local & foreign subject matter experts. Our team is highly focused and provides the best support as per your requirements and needs.

We provide a platform from where you can add value in you teams. We are highly fascinated on the development of your Technical and Management Teams.

We can provide on-site and classroom training.

## About Trainer

The trainer is our freelance foreign trainer. He has completed his Engineering in Electronics and Telecommunication. He has over 20 years of extensive experience in his field.

Currently he is working as a consultant and an industrial/corporate trainer.

He has been completed his certifications in.:

- Certified Maintenance and Reliability Professional (CMRP) – SMRP
- Certified Lean Six Sigma Black Belt - CLSSBB – Pyzdek Institute

- Certified MBTI® Practitioner
- Dale Carnegie® (Art of Training) certificate
- Certified DISC Coach
- Certified Maintenance Reliability Professional

He has been provide consultancy in:

- RFP and/or proposals development
- Sub-supplier offers/proposals evaluation
- Business Process Improvement – Lean Manufacturing
- Maintenance and operations KPI development, implementation and analysis.
- Perform RCM and TPM maintenance studies and consultations

As an Independent trainer in technical management and soft skills topics such as:

- Lean Six Sigma / Introduction – Yellow Belt - Green Belt
- Root Cause Analysis – RCA
- Technical and Business Reports Writing
- Effective Maintenance Planning and Scheduling CMRP – Certification Preparation Course
- TPM – Kaizen – 5S
- Process Improvement
- Data Analysis, and Representation (Basic/mid-level associated with Excel training).

He is extremely passionate and enthusiastic about training and coaching. He has been trained 1000 of personals all over the world. He has been conducted training sessions in SABIC-Dubai, Dubai Cable ( Ducab), DEWA, Sohar Aluminium – Oman, Oman Gaz, Qatar Foundation, Imdad – Dubai, KOREK Telecom, Kurdistan, Saudi Telecom Company, SABIC – USA, PIFSS, Kuwait, Ajman Municipality, Saudi Railways, Siemens-KSA, ADNOC, ASEC Engineering, – Egypt, Sibur – Russia etc.

## About RCA:

Problems do happen in our production facilities. Merely uncovering factual root causes does not solve or reduce the risk or failure. Unless recommendations, corrective and proactive actions are appropriate, approved and implemented, the problems will continue to exist. Management expects to receive solid, factual data and information in the analysis to support and approve funds for implementing recommendations.

RCA practice aims to solve problems by attempting to identify and correct the root causes of events, as opposed to simply addressing their symptoms. By focusing correction on root causes, problem recurrence can be prevented. RCFA (Root Cause Failure Analysis) recognizes that complete prevention of recurrence by one corrective action is not always possible.

Root cause analysis is not a single, sharply defined methodology; there are many different tools, processes, and philosophies for performing RCA. Most of RCA tools are also use as Risk Analysis and Management Tools.

In our course we will present clear understanding of different RCA tools, sequences and undergo exercises that will pave the road for immediate application for the RCA concepts into your everyday operations.

## Course Objective:

By the end of the course, participants will understand and learn:

- 1) To understand the basics of RCA and its relation to modern maintenance
- 2) To understand the difference between failure modes, failures and failure effects
- 3) To understand the difference between sporadic, chronic and cascading failures
- 4) To present in theory and practice through exercises the different RCA tools
- 5) To relate RCA analysis and tools to other maintenance methodologies
- 6) Present Actual case studies of complex situations
- 7) Demonstrate several software tools of different capabilities to assist in RCA application

## Course Outline

1. Concept of Failure
  - 1.1. Machine Failure
  - 1.2. Types of Failure Causes
  - 1.3. Effect of Failure
  - 1.4. Failure Cascading
  - 1.5. Failure Modes
  - 1.6. Chronic vs. Sporadic Problems
2. Root Cause Failure Analysis process
  - 2.1. What RCFA is?
  - 2.2. Why it is done?
  - 2.3. Types of Root Causes
  - 2.4. Process of RCA - Generic Steps in an RCFA
  - 2.5. Challenges in Setting up RCFA

3. Basic pre-RCA tools
  - 3.1. Problem definition
  - 3.2. Process definitions
  - 3.3. Process Mapping – Flow chart
  - 3.4. SIPOC
  - 3.5. Data collection tools
  - 3.6. Essential statistics
4. RCA tools: Prioritization – FMEA Failure Modes & Effects Analysis
  - 4.1. Failure Analysis Methods
  - 4.2. Risk 4.3. Implementing FMEA
  - 4.4. FMEA Procedure
  - 4.5. FEMA exercises Priority Number – RPN
5. Understanding and Investigation
  - 5.1. 5 Whys technique
  - 5.2. The Ishikawa Diagram
  - 5.3. Fault Tree Analysis - FTA
  - 5.4. Pareto Charts
  - 5.5. Tools analysis and exercises' results discussions
6. Decision Making methodologies
  - 6.1. What is a Decision
  - 6.2. Financial methods
  - 6.3. Operational methods
7. Case studies and SW tools
  - 7.1. Dust Explosions RCA
  - 7.2. Assignment case studies discussion
  - 7.3. SW package samples
8. Assessment and continuous improvement through KPIs
  - 8.1. Introduction To KPIs
  - 8.2. Choosing KPIs
  - 8.3. Measuring the O & M Program effectiveness

9. Lean Six Sigma in RCA
  - 9.1. Visual Management: 5S
  - 9.2. The effect of losses/waste
  - 9.3. Value Stream Mapping
  - 9.4. The effect of inconsistency
  - 9.5. Detecting wastes through DOWNTIME tool
  - 9.6. DAMIC process

The  
**HIPPOCAMPUS**  
Industrial Training & Consulting

### Contact Us

Phone: +92 310 265 8003

Email: [training@hippocampusgroup.com](mailto:training@hippocampusgroup.com)

Web: [www.hippocampusgroup.com](http://www.hippocampusgroup.com)