

**Training Title**

MRO INVENTORY OPTIMISATION AND COST REDUCTION

**Training Duration**

5 days

**Training Venue and Dates**

RM243	MRO Inventory Optimisation and Cost Reduction	5	24 – 28 November, 2019	\$4,250	Dubai, UAE
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In any of the 5 star hotels. The exact venue will be informed once finalized.

**Training Fees**

- 4,250 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch.

**Training Certificate**

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

**TRAINING DESCRIPTION**

Most companies do a bad job of managing their inventory effectively. There are many reasons for this, but it usually starts with bad submission of vendors recommended spare parts data, poor cataloguing and selecting initial spares.

**Common spare parts master data issues in the CMMS are:**

- Poor & inconsistent part naming
- Lack of attributes
- No BOMs created
- Mfg's P/N & Vendor P/Ns are mixed
- MPN a standardised formatting has not been used
- All master data fields are not populated

**These issues results in**

- High number of duplicates 10-15% is normal
- Inefficient use of tradesman time looking for spares
- Emergency purchases
- Excess machine downtime
- Cannibalization of a stand-by machine
- Lack of focus on standardisation & rationalisation
- Higher inventory costs.

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From our experience, this is not limited to any one industry, irrespective of the industry, e.g. Oil and Gas, Mining, Power, Food & Drink, Electronics, Semi-Conductor plants all do a bad job of managing spares leading to excess costs.

This very practical 5-day workshop covers all aspects related to reducing inventory and costs of spare parts and is supported by case studies, software and practical exercises to aid understanding, and follows our 6-Phase inventory reduction process AUDIT, DOCUMENT, CLEANSE, RATIONALISE, OPTIMISE & MEASURE. We include 31 inventory reduction tactics structured in the above 6 phases.

This workshop focuses on reducing the inventory, an area often overlooked. There are very few courses conducted that deal with the practical issues of spares cataloguing, optimising spares and stock reduction.

**After this course, delegates will leave the workshop with tools and techniques that they can immediately apply in their own companies and start to reduce inventory costs, in some cases there are BIG savings to be made.**

**An MS Excel Analysis worksheet containing all formulae will be provided to conduct an audit of your current inventory parameters for either ROP or Min-Max control.**

We will focus on the three main replenishment strategies ROP, Min-Max and Constant Vendor Delivery. **NEW material has been included to highlight MRP using the SAP system**

The course is of particular benefit to companies who:

- Want to audit their spares data quality or
- Need to upgrade their CMMS system or
- Want to optimise inventory and evaluate slow moving spares
- Want to reduce inventory levels and costs

The course will cover both spares in both project and operational phases, and many case studies will be shown including a reduction of 50-70% in the number of line items for one material type.

## **TRAINING OBJECTIVES**

**As a result of attending this workshop delegates will understand:**

- ISO5500 and what it means for inventory management
- How to achieve consistent cataloguing
- The different costs associated with spares management
- The techniques to improve reliability resulting in less spares usage

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- How to select the right inventory policy for fast and slow-moving parts
- Good practices related to SPIR forms
- How to evaluate safety stocks scientifically
- How to determine how many to buy
- The strategies to minimise stock
- How to justify the financial case for high value spares
- ◆ How to measure inventory performance
- What can be done in-house and what can be done with specialist software
- Audit the quality of their inventory cataloguing data
- Understand the different approaches to data cleansing

### **WHO SHOULD ATTEND?**

- Maintenance Managers, Engineers,
- CMMS super users
- Warehouse Managers & Supervisors,
- Project Engineers
- Spares & Inventory Personnel
- Purchasing & Logistics
- Cost Controllers

### **TRAINING METHODOLOGY:**

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course. Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

### **DAILY OUTLINE**

#### **Day 1**

#### **Topic 1: Introduction to Spares Management**

- Pre-course test (NEW)
- Delegates' Issues

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- Common issues in inventory management with real examples
- Where we incur excess costs
- Benefits of improved inventory management
- Terms and definitions used in the workshop.

## **Topic 2: Inventory Cost Reduction Programme**

- Introduction to 31 tactics split between 6 phases (Audit, Document, Cleanse, Rationalise, Optimise, Monitor) that make up our inventory reduction programme, including:
  - Auditing CMMS Data Quality
  - Challenge the decision whether to stock and who pays
  - Spare criticality and service levels
  - Applying the 80-20 rule to AIV, Item Cost, Stock Holding Cost
  - Identifying duplicate stock
  - Reduce internal lead times to reduce stock holding costs
  - Standardisation, identify OPMs, APMs, etc.
  - Understand different strategies, (min-max, reorder point control, constant vendor delivery )
  - Select the most appropriate replenishment strategy
  - Make a plan
  - etc

## **Topic 3: Improving Master Data from Vendors**

- Standard initial spares forms, their purpose and why they are submitted incorrectly
- A critical review of a typical form and the associated procedures sent to vendors
- Examples of good and bad forms
- 10 rules for effective use of forms
- Improved design of an electronic form

## **Day 2**

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## **Topic 4: Effective Cataloguing**

Introduction and detailed examples of an 8-step cataloguing process, i.e.

- Defining naming, formatting
- Developing spare type guides to ensure consistent part naming
- Developing rules for Mfg's Part/Nos, dimensions, abbreviations
- Define strategies i.e. who to buy from, OEMs, Vendors, specialist company
- Develop a set of cataloguing best practice guides
- Create upload file and quality checks

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- Benefits of commercial cataloguing software

Many examples collected from our numerous studies will be shown

### **Topic 5: Understand Different Spares Costs**

- Different costs used in the stock management process, e.g. buying, holding cost, item cost, issue cost, penalty cost, total ownership costs

### **Topic 6: Introduction to Reliability Theory**

- Normal & Poisson distribution
- Calculating Weibull parameters
- Explanation of service levels, and understanding of what they really mean
- Importance of the P-F

### **Day 3**

### **Topic 7: Challenge Vendors Recommended Quantities**

- Calculate estimated annual demand rates based on MTBFs to challenge vendor proposed values
- Case studies where actual consumption has exceeded initial estimates

### **Topic 8: Setting of Re-Order Points, Safety Stock**

- Different approaches to set ROPs
- Using the Poisson distribution to set re-order points based on lead time, annual usage and criticality
- Demonstration on how rules of thumb are inappropriate

### **Topic 9: How Many to Order? Determining the EOQ**

- How to determine the quantity to order
- The effects of ordering too many or too few,
- EOQ related to evaluation discounts for higher order quantities

### **Day 4**

### **Topic 10 Auditing the Effectiveness of Current Inventory Controls**

- Evaluate service levels; compare existing with those parameters in the Inventory Management System

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- Different KPIs such as Turnover Ratios, Issue Rates, Annual Issue Value, Stock holding value
- Using an MS Excel analysis worksheet with all formula and the facility to calculate current KPIs, Optimised parameters and Proposed parameters
- Additional Basic XLS for minimum analysis NEW

**Topic 11 Database Tools versus MS Excel**

- Demonstration of how an MS Access Based Application is more effective

**Topic 12: Alternative Strategies**

- What to do when the EOQ is not valid – the Min-Max & CVD strategy
- Setting parameters for SAP users

**Day 5**

**Topic 13 Critical Spares Analysis**

- What are critical spares, are they insurance spares
- Approaches to conduct an evaluation of critical spares
- Conduct a simple example

**Session 14: KPI Spares Reporting System**

- Discuss purchasing and inventory KPIs using 7 key result areas
- Line of site diagrams
- What makes an effective performance management system
- Handout KPIs for Inventory control

**Session 15: Delegates Action Plan**

- Sample audit feedback report
- Delegates write down their actions to make a difference
- Delegates present their intended actions

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NOTE:

**Pre & Post Tests will be conducted**

**Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.**

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