OPTILOG

Inventory Optimisation and Spares Modelling

2-day Workshop

Introduction

Extensive research has shown that all process sites worldwide have approximately 23% excess inventory, and that holding or carrying costs at these sites averages 27% annually. This represents millions of Rands that would otherwise be available for on-going operations as well as increasing shareholder value.

This interactive and practical workshop will focus on the typical challenges that industry faces in terms of inventory and spares optimisation. It will provide insight on how to manage and predict inventory and material requirements in a better way.

Part of the workshop includes practical hands-on use of a software modelling tool where participants will individually build and model different scenarios with guidance from the facilitator.

Course Objectives

- Grasping the concept of inventory and spares optimisation.
- Discussing the underlying principles of inventory and spares modelling.
- Looking at ways on how to decrease your risk and increase your reliability process, which will result in increased cost savings.
- Optimising the quantity of inventory and spares to ensure that there is no excessive capital and retention cost.
- Providing you with valuable insight in the V-Metric Model and Multi-Echelon Techniques [as developed by Dr Craig C Sherbrooke].
- Ensuring that productivity gains are derived by having the "correct" balance of spares, providing for faster production restarts.
- Presenting hands-on experience on typical Modelling Software (V-Metric).

Typical Course Candidates

- Stores / Procurement Managers
- Material Requirements Planning Managers
- Warehouse Managers
- Maintenance / Logistics Managers
- Engineers and Asset Managers
- Logisticians and Log Analysts
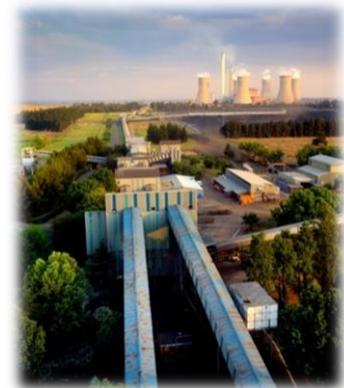
For Bookings
Contact: Amanda Burger
support@optilog.co.za

Tel: +27 63 990-7941
Fax: +86 455 8450
P.O. Box 10319
Centurion, 0046
South Africa
www.optilog.co.za

Inventory Optimisation and Spares Modelling

Course Outline

Introduction

- Providing an overview of inventory optimisation
- Looking at various modelling techniques
- Increasing the reliability of your processes
- Ensuring the correct combination of spares to support local conditions and practices relating to maintainability
- Achieving greater sustainability through efficient optimisation processes

Logistics

- Understanding the environment in which you operate
- Looking into the scope of the logistics function
- Identifying the various elements of logistics

Calculation Methods

- Rule of thumb
- Exponential smoothing
- Economic lot / batch size and Wilson's formula
- Fill rate approach
- Palm's theory
- Item approach
- System approach and advantages
- Repairable vs. consumable items
- Multi Item / Indenture Optimisation
- Multi-Echelon optimisation
- Multi-Intermediate Echelon optimisation
- Marginal analysis models
- V-Metric Model
  - Economic order quantities
  - Parts cannibalisation
  - Repair level lead times
  - Procurement lead times
  - Modelling parameters
  - Budget constraint
  - Operational availability
  - Common items
  - Item / LRU redundancy
  - Lateral resupply
  - Item criticality
  - Site essentiality

Warehousing

- Understanding how your warehouse operates
- Ensuring that warehouse logistics are implemented according to requirements
- Exploring warehouse distribution channels and objectives
- Optimising your transportation function with a view to save costs

Inventory Management

- Providing you with strategies on how to optimise inventory management
- Stock level vs flow
- Ordering
- Back orders

Software Modelling [Practical]

- Introduction to V-Metric
- Model structure
- Parts
- Structures
- Operating and support sites
- Projects
- Deployments and scenarios
- Running the model
- Optimisation reporting
- Sensitivity analysis and trade-off

Modeling Challenges

- Models
  - Logistics support
  - Logistics engineering and reliability growth programs
- Unknowns and assumptions
- Data
  - Quality
  - Quantity
- Frequency of Optimisation

Other Modelling Tools

- Engineering and design modelling
- Life cycle cost / total ownership cost
- Centralised data repository