

MRO and Spares

MRO Materials Management

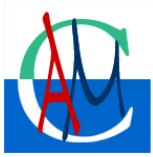
Very little maintenance work can be performed completely or successfully without the use of parts and materials. They are critical to operational excellence, but you can have too much, too many or too little. Too much drives up inventory holding costs. Too little results in low system availability, excessive downtime and higher repair costs.

Our practical training and consulting services support your efforts to control and manage inventories. Both are critical activities that, if not done well, can result in escalating costs and unplanned production downtime. Too often, MRO materials are left in the hands of people who are ill-prepared, ill-trained and / or under extreme pressure to cut costs. Cost cutting can be done, but it must be done intelligently or it will result in negative impacts in other areas of the business. Like maintenance work execution, this is critical to operational excellence.

Our training includes practical exercises and discussions along with detailed explanations of concepts and mathematical models. Our training offerings cover:

Inventory Control of MRO Materials (5 days)

- Mathematics Review
- Analysis of Time Series (demand and consumption)
- Data base quality control and anomalies
- The variable time: how to define and to use, cycles, review periods, forecasting horizons.
- *Lead time*: how to define and to measure.
- Forecast models
- Inventory Control vs. Inventory Management
- Replenishment logic: stock position, available stock, net stock
- Periodic Review vs Transactions Reporting Systems
- Inventory Models
- Global Parameters: buying cost and carrying charge
- EOQ Model and other models
- ERPs: their inventory models and key limitations
- Criticality: how to assign criticality to stocked parts
- Safety Stock: empirical versus statistical
- Inventory Control Parameters (safety stock, reorder point, reorder quantity)
- Measures of performance (service level, fill rate)



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Spare Parts Inventory Control (advanced level – 5 days)

- Review of Basic Statistics
- Deterministic versus stochastic variables
- Analysis of Time Series (demand and consumption)
- Data base quality control and anomalies
- *Lead time*: how to define and to measure
- Advanced Forecast models
- Slow-moving items
- Poisson Process
- Palm's Theorem (Operations Research).
- Replenishment logic: stock position, available stock, net stock
- EOQ and other models
- Specifying Initial Spare Parts
- Criticality: how to assign criticality to stocked parts
- Risk Analysis
- Inventory Control Parameters (safety stock, reorder point, reorder quantity, base stock level)
- Measures of performance (fill rate and backorder)
- Spare Parts Optimization Tools
- ERP systems: limitations in the control of spare parts