



مركز المستشار الوطني للتدريب

National Consultant Centre For Training LLC

YOUR GATE TO HANDS-ON TRAINING

5-Day Cement Industry Training Course In

SPARE PARTS MANAGEMENT IN CEMENT INDUSTRY

Abu Dhabi - UAE, 24 – 28 Aug. 2026

COURSE LEVEL: INTERMEDIATE

COURSE OVERVIEW:

Spare parts management in the cement industry is the strategic control of the multi-million-dollar inventory required to ensure continuous operation in a high wear environment. This course defines the balance between "Inventory Carrying Costs" and the "Cost of Production Loss" caused by missing critical components. It establishes a technical and logistical framework for categorizing, storing, and procuring thousands of unique line items—from massive kiln tires to delicate sensors.

The scope of this training involves the integration of maintenance planning with warehouse operations to ensure part availability for both planned overhauls and emergency repairs. It covers the methodology of "Asset Criticality Ranking" to determine which parts must be kept in stock versus those that can be ordered on demand. Furthermore, the course addresses the use of Computerized Maintenance Management Systems (CMMS) to automate reorder points and track the movement of slow-moving and obsolete stock.

Coverage includes detailed modules on warehouse 5S standards, the management of "Insurance Spares," and the technical auditing of supplier quality. Participants will explore the financial implications of "Vendor Managed Inventory" (VMI) and the role of "Inter-plant" spare parts sharing in large corporate groups. Through the study of supply chain risks and lead time optimization, attendees will gain the expertise required to reduce working capital while maximizing plant reliability.

COURSE OBJECTIVES:

After completion of this course, the participants will be able to:

- Implement an "Asset-Based" spare parts classification system.
- Calculate the "Economic Order Quantity" (EOQ) for high-turnover items.
- Perform "ABC" and "VED" (Vital, Essential, Desirable) analysis on inventory.
- Define and manage "Insurance Spares" for major kiln and mill components.
- Utilize CMMS/ERP systems to optimize reorder points and safety stocks.
- Implement "Warehouse 5S" and proper preservation for mechanical parts.
- Develop "Technical Specifications" for the procurement of critical spares.
- Evaluate supplier performance based on lead time and quality consistency.
- Minimize "Inventory Obsolescence" through regular technical reviews.
- Manage "Rotable Spares" and the repair-refurbishment cycle.
- Reduce "Working Capital" tied up in slow-moving inventory.

- Conduct a "Spare Parts Risk Assessment" for the annual shutdown.

TARGET AUDIENCE:

This course is intended for Warehouse Managers, Maintenance Planners, Procurement Officers, Inventory Controllers, and Technical Storekeepers.

TRAINING COURSE METHODOLOGY:

A highly interactive combination of lectures, discussion sessions, and case studies will be employed to maximize the transfer of information, knowledge, and experience. The course will be intensive, practical, and highly interactive. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. The attendants will also be encouraged to raise more of their questions and to share in developing the right answers using their analysis and experience. There will also be some indoor experiential activities to enhance the learning experience. Course material will be provided in PowerPoint, with necessary animations, learning videos, and general discussions.

The course participants shall be evaluated before, during, and at the end of the course.

COURSE CERTIFICATE:

National Consultant Centre for Training LLC (NCC) will issue an Attendance Certificate to all participants completing a minimum of 80% of the total attendance time requirement.

COURSE OUTLINE / COURSE CONTENT:

MODULE 1: THE ROLE OF SPARES IN PLANT RELIABILITY

- Link between "Spare Parts Availability" and "Mean Time To Repair" (MTTR).
- Impact of missing parts on the "Production Loss" (Opportunity Cost).
- Understanding the "Cement Plant Asset Hierarchy."
- Role of the "Maintenance-Store-Procurement" triangle.
- Strategic objectives of modern inventory management.

MODULE 2: CLASSIFICATION AND CODIFICATION STRATEGIES

- Implementing a standardized "Material Codification" system.
- Differentiating between "Consumables," "Wear Parts," and "Strategic Spares."
- Use of "UNSPSC" or custom plant-specific coding.
- Importance of high-quality descriptions and technical attributes.
- Managing the "Bill of Materials" (BOM) for each equipment asset.

MODULE 3: INVENTORY PLANNING AND OPTIMIZATION

- Principles of "Demand Forecasting" for planned maintenance.
- Setting "Safety Stock" levels based on criticality and lead time.
- Calculating "Reorder Points" (ROP) and "Max Levels."
- Managing the "Long Lead Time" items from international OEMs.
- Optimization software and statistical tools for inventory management.

MODULE 4: WAREHOUSE OPERATIONS AND 5S STANDARDS

- Layout design for heavy cement plant spares (Kiln tires, Rollers).
- Implementing "5S" in the warehouse: Sort, Straighten, Shine, Standardize, Sustain.
- Material handling equipment: Forklifts, Overhead cranes, and Racking.
- Barcoding and "RFID" technology for real-time tracking.
- Receiving, Inspection, and "Binning" procedures.

MODULE 5: PRESERVATION AND SHELF-LIFE MANAGEMENT

- Storing "Electronic Components" in climate-controlled environments.
- Proper storage of "Bearings" (Vibration and position).
- Preservation of "Rubber and Polymer" parts (O-rings, Belts).
- Managing "Lubricants and Chemicals" (MSDS and spill control).
- Corrosion protection for "Machined Surfaces" in outdoor storage.

MODULE 6: STRATEGIC SOURCING AND PROCUREMENT

- Global vs. Local sourcing: Cost, Time, and Quality trade-offs.
- Selecting "OEM" vs. "OES" (Original Equipment Supplier) vs. "Generic."
- Developing "Service Level Agreements" (SLAs) with critical suppliers.
- Managing "Vendor Managed Inventory" (VMI) for consumables.
- Total Cost of Ownership (TCO) in procurement decisions.

MODULE 7: ROTABLE SPARES AND REPAIR MANAGEMENT

- Managing the "Closed-Loop" process for repairable components.
- Decision making: "Repair vs. Replace" for gearboxes and motors.
- Quality auditing of "Third-Party Repair" workshops.
- Tracking the "Service History" of rotatable assets.
- Warranty management for refurbished parts.

MODULE 8: SHUTDOWN SPARE PARTS PLANNING

- Creating the "Shutdown Parts List" 6-12 months in advance.
- Managing the "Kitting" process for planned work orders.
- Staging of parts at the "Work Site" vs. Warehouse storage.
- Handling "Emergency Expediting" during a kiln outage.
- Post-shutdown inventory reconciliation and restocking.

MODULE 9: FINANCIAL CONTROL AND AUDITING

- Managing "Inventory Valuation" methods (FIFO, LIFO, Weighted Average).
- Conducting "Cycle Counting" vs. Annual Physical Inventory.
- Identifying and "Writing Off" obsolete and surplus stock.
- Analyzing "Inventory Turnover Ratio" for the cement plant.
- Budgeting for "Insurance Spares" (CAPEX vs. OPEX).

MODULE 10: TECHNOLOGY AND FUTURE TRENDS

- Role of "Industry 4.0" in smart inventory management.

- Introduction to "3D Printing" (Additive Manufacturing) for on-site spares.
- Using "Predictive Maintenance" (PdM) data to trigger spare orders.
- Collaboration platforms for "Inter-Plant" spare sharing.
- Course wrap-up and "Spare Parts Management" action plan.