



Institute of Maintenance Management Education



PRACTICE-ORIENTED DISTANCE TRAINING CERTIFICATION COURSE IN MAINTENANCE MANAGEMENT



WHY THIS COURSE

- Are you a working maintenance engineer, manager or technical executive looking for a course in maintenance management correlated to your present practical requirements and unequivocally focused to sharpen your professional skills to improve maintenance function in your plant?
- Do you aim to master controlling plant equipment failures & downtime and improve reliability & uptime of your machines with utmost economical efficiency?
- Are you aiming to learn effective maintenance planning, scheduling, monitoring & controlling?
- Are you looking to equip yourself with various tools and techniques to improve maintenance productivity and reduce maintenance cost?
- Do you need to update your skills for effective planning and optimum inventory of spare parts in your plant?
- Are you contemplating a distance training certification course to elevate your true professional skills in maintenance management as lifetime asset?
- **There are in fact many more relevant issues as above that the course is precisely aimed at. Briefly, the course imparts a number of maintenance management concepts, ideas, tools and techniques together with practical examples & case studies and prepares candidates as effective resources ready to improve maintenance programmes and practices in their working environments.**

COURSE BACKGROUND

Organizations need to understand clearly that maintenance performance cannot be enhanced on a sustainable basis without the proper support and application of the best practices. When organizations get it right, effective maintenance management becomes the rising tide that lifts up the company's performance. Some of the compelling benefits of effective maintenance management include consistently higher uptime & OEE; better value of money spent on maintenance; lower parts inventory & reduced waste; better time efficiency in maintenance jobs & projects; greater transparency; both efficient and effective managers, engineers, supervisors and work force, etc.

'Practice-oriented Distance Training Certification Course in Maintenance Management' is designed for plant maintenance engineers, managers and technical executives with a view to add higher dimensions to their skills and managerial competence; facilitate best practices in managing maintenance function; assist in optimizing maintenance costs; and, promote excellence in their plant maintenance operations.

Excellence in maintenance management is not common, and improving maintenance effectiveness requires continuous effort to rise to the next higher level of performance. 'Practice-oriented Distance Training Certification Course in Maintenance Management' is focused on developing participants to realize higher potential for the continuity in improvement effort. The course provides most comprehensive, systematic learning of various topics to gain better understanding and new insights to pave way for higher economical efficiency in managing maintenance function. The course involves a wide spectrum, in-depth study and facilitates in laying strong foundation for maintenance management. The learning through the course gives birth to productive ideas to help improve maintenance practices in their work environments. Maintenance organizations need to be consistently infused with greater professionalism to enable focusing on continuous improvement and innovative developments.

COURSE MISSION

To equip maintenance reliability personnel to achieve higher dimensions in maintenance management and help realize greater value to their skills, competence and professional acumen.

PARTICIPATION

Maintenance engineers, managers, technical executives, etc. working in different industries are eligible for the course registration.

MODUS OPERANDI

Candidates receive complete set of 21 training modules (*e-books*) specially designed and prepared by IMME for this course incorporating easy to understanding study materials, case studies & examples, forms & formats, quizzes & exercises, etc. Course instructions are forwarded to the candidates through e-mails. Candidates send back their answer papers for evaluation within the scheduled time. Answers forwarded by the candidates within the specified time schedule are examined by IMME, and depending on

their satisfactory performance, they are awarded 'Certificate of Competence in Maintenance Management'.

COURSE CERTIFICATION

Successful candidates are awarded 'Certificate of Competence in Maintenance Management'. Candidates with below par performance are however given 'Certificate of Attendance'.

COURSE OUTLINES

Training Course is comprehensively designed to include 21 training modules (*e-books*) on different topics related to maintenance management covering in-depth details with practical aspects suited to maintenance engineers & managers working in different industries. The main titles of the 21 training modules (*e-books*) included in the course are shown below:

- Profitability, Productivity and Maintenance Management
- Basics and Broad Aspects of Maintenance – I
- Basics and Broad Aspects of Maintenance – II
- Tribology
- Work Study in Maintenance
- The Maintenance Function
- Lubrication Management and Practices
- Selective Approach in Maintenance
- Maintenance Organization
- Maintenance Planning and Scheduling
- Designing a Planned Maintenance System
- Predictive Maintenance
- Maintenance Budgeting, Costing and Cost Control
- Maintenance Information System, Performance Analysis and Control
- Reliability, Maintainability and Availability
- Equipment Replacement and Investment Analysis
- Machine Failure Analysis
- Machine Reconditioning/Rebuilding
- Value Analysis in Maintenance
- Safety in Maintenance
- Spare Parts Management

DURATION

- 6 Months

ABOUT THE COURSE DIRECTOR

Course Director: *Mr. J. K. Sharma, Maintenance Reliability Professional, IITian, Executive Coach, Ace Trainer, 35+ Year Exp. & more*

LinkedIn Profile: [linkedin.com/in/jitendra-kumar-sharma-61080652](https://www.linkedin.com/in/jitendra-kumar-sharma-61080652)

Mr. J. K. Sharma is working as Director (Courses) and Principal Consultant at Institute of Maintenance Management Education and is the in-charge of the course along with a team of experienced faculty members. Mr. J. K. Sharma has more than thirty five years of rich and diversified experience spent on training, consultancy, research & development programmes related to maintenance & reliability. He is a Bachelor of Engineering from a premier institution, namely Indian Institute of Technology, Roorkee, India and Masters in Industrial Engineering with specialization in Plant Engineering and Maintenance Management from Training Institute for Productivity and Industrial Engineering (now, Dr. Ambedkar Institute of Productivity), Chennai. As a specialist and renowned faculty in the field of maintenance & reliability, he has designed and conducted a large number of seminars, workshops, in-house & virtual training programmes, distance training courses, industrial audits, surveys and assignments in his long professional career. He continues to inspire maintenance reliability community and plays a key role in improving productivity, efficiency and effectiveness of maintenance function in manufacturing industries.

He was also involved in conducting a prestigious national survey on 'Maintenance Systems and Practices' in different sectors of industry besides organizing various seminars, workshops and other development activities under the auspices of National Productivity Council, India where he worked as Deputy Director (Plant Engineering) in 1970s. The reports of this survey were published and later on tabled in the Indian Parliament also.

He has successfully conducted scores of top quality training programmes & courses, workshops and seminars on different themes & modules and trained tens of thousand of maintenance managers, plant engineers, technical executives, team leaders, supervisors, technicians, etc. from a large number of reputed companies in the corporate sector in a period of over thirty five years. He has also carried out various consultancy assignments and authored several papers and training modules based on various aspects of maintenance reliability function and worked in association with foreign experts, consultants and trainers.

ABOUT IMME AND MAINTENANCE RELIABILITY TRAINING PROGRAMMES & COURSES

Institute of Maintenance Management Education (www.immeinstitute.org) commenced operations in late 70s as a leading training and consultancy organization to facilitate paving way for excellence in maintenance function in industry. Since then IMME has conducted a large number of top quality maintenance reliability training programmes on different themes and topics. Tens of thousands of candidates from various reputed companies in the corporate sector have participated in different training programmes & courses conducted by IMME in a period of over 30 years.

Maintenance reliability of plant equipment is a key activity in any manufacturing organization. In order to attain top performance in maintaining its assets, a company needs a comprehensive approach that depends on the integration of people, plant and processes. The maintenance reliability organization needs to be efficient, well organized, cost-effective and innovative to realize higher plant availability and smooth operations. Through maintenance reliability training, coaching and mentoring, Institute of Maintenance Management Education (IMME) provides value to the clients by focusing on creation of organic teams who understand asset performance management at strategic reliability level to help improve business profitability.

IMME helps companies reach their maintenance reliability goals by way of building capacity and competency – knowledge, skill, motivation, initiative, team work, etc. of maintenance managers, plant engineers, maintenance supervisors, technicians, etc. through training on various themes related to maintenance reliability function. Identifying and embracing the best practices in maintenance reliability management enables an organization to avoid failures, breakdown maintenance work and other barriers to success while maintaining safe, reliable operations and minimizing costs.

EXCELLENCE IN TRAINING FOR OVER 30 YEARS

COURSE COVERAGE

The main topics covered in 21 training modules (*referred as books*) of Practice-oriented Distance Training Certification Course in Maintenance Management are briefly summarized as below:

- **Profitability, Productivity and Maintenance Management (TB-1)**

Role of Maintenance in an Enterprise, Manufacturing Cost Components, Brief on Management, Managerial Functions – Planning, Organizing, Staffing, Directing & Controlling, Profitability and Rate of Return on Investment, Reasons for Low R.O.I., Increasing R.O.I., Concepts of Productivity, Wastage in Industry – Wastage in Maintenance Operations – Wastage of Lubricants, Gland Packings, Nuts and Bolts, Bearings & Many Other Items, Training for Effective Wastage Control, Ways to Increase Productivity – Basic Approaches, Measuring Increase in Productivity, Numerous Practical Cases of Productivity Improvement, Productivity of Human Resources, Maintenance Productivity, Role of Maintenance in Energy Conservation – Planning and Organizing Energy Conservation Programmes, Control on Compressed Air Consumption, Control of Steam and Heat energy, Conservation of Electrical Power, Development of Better Maintenance and Repair Procedures, etc.

- **Basics and Broad Aspects of Maintenance – I (TB-2)**

Introduction to Maintenance Management, Changing Patterns of Technology, Effect of High Technology Plants on Maintenance Function, Importance of Maintenance at Macro Level – World-wide Cost of Maintenance, Micro Level Importance, Characteristics of Maintenance, Attitudes Towards Maintenance Function, Production V/s Maintenance,

National Maintenance Strategy, Human Element in Maintenance – Professional Manager, Role of Supervisors, Essence of Communications, Decision-making, Polyvalent Craftmanship, Performance of a Person, Motivational & Training Aspects, Effective Human Relations, Systems Approach to Maintenance, etc.

- **Basics and Broad Aspects of Maintenance – II (TB-3)**

Equipment Deterioration and Need of Maintenance – Deterioration Due to Wear & Tear, Corrosion, Mal-operation & Misuse, Three Phases in Equipment Operation Cycle, Plant Availability – Definition & Methods for Calculating Machine Availability, Delay Factors, Plant Capacity Utilization – Cases of Process Plants, Engineering Units and Power Plants, Gap in Plant Availability and Capacity Utilization and Case History of Open Cast Mine, Cost of Maintenance – Elements of Maintenance Cost, Cost Ratio of Maintenance Materials to Maintenance Labour, Direct and Indirect Cost of Maintenance, Maintenance Cost Indices, New Dimensions in Maintenance – Plant Engineering, Tribology, Materials Technology, Terotechnology – Life-cycle and Life-cycle Costs, Cost of Ownership, Practice of Terotechnology and Customer-Supplier Relationship, Reducing Costs Through Terotechnology – Procurement of Plant Machinery and Equipment, Seller-Buyer Interface, LCC Process, Cost Breakdown Structuring and Cost Estimating, etc.

- **Tribology and Its Application (TB-4)**

Background of Tribology, Nature of Metallic Surfaces, Surface Roughness, Two Surfaces in Contact, Sliding Friction – Laws of Friction, Limitations of Classical Laws, Fifth Law and Friction Phenomenon, General Laws of Friction – Sliding, Rolling and Fluid Frictions, Introduction to Wear, Adhesive Wear – Scuffing and Fretting, Abrasive Wear, Gouging Abrasion, Low Stress Abrasion, High Stress Abrasion (Grinding Abrasion), Erosion Abrasion, Abrasion Wear Rates and Surface Changing for Abrasion Resistance, Fatigue Wear – Cavitation Wear, Corrosive Wear, Practical Examples, Selection of Abrasion-resistant Materials, Other Considerations in Material Selection, Wear Reduction Measures – Improving Wear Resistance, Tribological Problems and Solutions, Principles of Lubrication, Hydrodynamic Lubrication, Hydrostatic Lubrication, Elasto-hydrodynamic Lubrication, Boundary Lubrication, Case of Bearing Failure, Survey of Tribological Practices in Industry, etc.

- **Work Study in Maintenance (TB-5)**

Introduction to Work Study, Historical Background, Method Study – Outline Process Chart, Flow Process Chart, Two-handed Process Chart, Multiple Activity Chart, Flow Diagram and String Diagram, Critical Examination, Development and Installation of New Methods, Some Cases of Methods Improvement, Work Sampling Techniques, Maintenance Work Measurement and Development of Maintenance Time Standards – Need to Measure Maintenance Work, Techniques of Maintenance Work Measurement – Job Estimating, Statistical Analysis of Past Records, Time Study, Production Studies, Analytical Estimation, Work Sampling, Standard Data, PMTS and MTM, Application of Work Measurement Techniques to Develop Maintenance Time Standards, etc.

- **The Maintenance Function (TB-6)**

Introduction to Maintenance Function, Maintenance Activities, Maintenance Trades, Operational and Cost Objectives, Structuring Maintenance Objectives, Setting Goals – Some Practical Examples, Maintenance Policies, Forms of Maintenance, Maintenance System, Benefits of Planned Maintenance System, Optimum Planned Maintenance, Numerous Maintenance Practices and Concepts – Planned and Unplanned Maintenance, Preventive Maintenance, Corrective Maintenance, Maintenance Prevention, Productive Maintenance, Operator Maintenance (Autonomous Maintenance), Functional Maintenance, Area Maintenance, Deferred Maintenance, Fixed Time Maintenance, Opportunity Maintenance, Modular Maintenance, Assigned Maintenance, Scheduled Maintenance, Preventive Maintenance Concepts, Preventive Maintenance vis-à-vis Breakdown Maintenance, Impact of Breakdown Maintenance on Company's Profitability, Objectives of Preventive Maintenance, Preventive Maintenance Work Activities, Benefits of Preventive Maintenance Programme, Limitations of Preventive Maintenance, Effect of Planned Maintenance System on Downtime, etc.

- **Lubrication Management and Practices (TB-7)**

Introduction, Historical Background, Lubrication – An Important Function of Maintenance, Purpose of Lubrication, Classification of Lubricants, Characteristics of Lubricating Oils – Viscosity, Viscosity Index, Flash Point and Fire Point, Pour Point and Cloud Point, Carbon Residue, Resistance to Oxidation, Thermal Stability, Resistance to Foaming and Emulsification, Additives – Detergents, Antifoam, Antirust/ Anticorrosion Inhibitors, Antioxidizers, Extreme Pressure Additives, Pour Point Depressants, Emulsifying Agents, Emulsion Breakers, Oiliness Additives & Viscosity Improvers, Categories of Lubricating Oils – Turbine Grade Oils, Hydraulic Oils, Automotive Engine Oils, Gear Oils, Machine Oils, Spindle Oils & Refrigeration Oils, Selection of Lubricating Oils, Lubricating Greases, Categories of

Greases – Soap Base Greases – Calcium Soap Greases, Sodium Soap Greases, Lithium Soap Greases and Non-soap Base Greases, Characteristics of Greases – Penetration or Consistency, Drop Point, Heat Stability, Oxidation Stability, Selection of Lubricating Greases, Greasing Practices, Lubrication Methods, Characteristics of Lubricating Devices and Systems, Planned Lubrication, Lubrication Survey, Standardization of Lubricants, Organizing Planned Lubrication, Lubricant Storage and Handling, Control of Lubrication Costs, etc.

- **Selective Approach in Maintenance (TB-8)**

Equipment Categorization, Categorization Plan, Deciding Factors, Deciding Weightages for the Selected Factors, Deciding Degrees for the Factors, Evaluation of Equipment Criticality, Selective Maintenance Policy – Most Critical, Critical and Important Equipments, Equipment Categorization Cases – Case of a Cement Plant, Case of an Engineering Industry, Case of a Process Plant, Case of a Sugar Plant, Case of a Paper Plant, Case of Ceramic Industry, Case of Mining Industry, Case of Engineering Process Industry, Case of a Heavy Chemical Industry, Case of Hydro-electric Power Station, Case of a Textile Mill, etc.

- **Maintenance Organization (TB-9)**

Necessity and Requirements of an Overall Effective Organization, Formal and Informal Organizations, Types of Organizations – Line Organization, Functional Organization, Line & Staff Organization, Distinction in Line and Staff Functions, Principles of Management, Delegation, Problems in Delegation, Span of Control, Decentralization, Difference in Delegation and Decentralization, Design of Overall Organization Structure, Important Principles of Organization, Factors Affecting Organization Structure, Process of Organization, Types of Maintenance Organizations – Centralized, Decentralized, Combined Centralized-Decentralized Organization, Matrix Organization, Maintenance Organizational Analysis and Effective Maintenance Organization, Maintenance Organization vis-à-vis Overall Organization, Internal Maintenance Organization, Ways to Organize Specialist Groups, Review of Maintenance Organization, Position or Job Description, etc.

- **Maintenance Planning and Scheduling (TB-10)**

Concepts of Planning, Benefits of Planning, Features of Planning Function, Requisites of Effective Maintenance Planning, Classification of Maintenance Plans, Elements of Maintenance Planning, Building Maintenance Planning – Building Maintenance Tasks, Master Plan for Building Maintenance and Priorities in Planning, Contract Maintenance Planning – Nature of Maintenance Work, Volume of Maintenance Work, Life-cycle of Plant Equipment, Industrial Relations and Contract Maintenance Cost, Facilities Planning, Planning for Expansion, Planning Plant Turnarounds, Maintenance Scheduling – Gantt Charts, Network Techniques – PERT/CPM, etc.

- **Designing A Planned Maintenance System (TB-11)**

Introduction, Mechanics of a Planned Maintenance System, Systematic Approach in Designing Planned Maintenance System, Inventory of Facilities, Codification of Facilities, Selection of Facilities for Planned Maintenance, Facility Records, Survey of Facilities, Equipment Correction List, Preparation of Master Checklists – Master Lubrication Checklists, Master Inspection Checklists, Standard Procedures, Job Instruction Cards, Preparation of Master Schedules, Manpower Estimation, Planned Maintenance Paper Work – Equipment History Card, Work Order, Inspection Reports/Records, Maintenance Manuals, Implementation of Planned Maintenance System and Difficulties, etc.

- **Predictive Maintenance (TB-12)**

Introduction, Subjective V/s Objective Checking, Aim of Condition-based Maintenance, Condition Monitoring Techniques – Static Monitoring – Non-destructive Testing (NDT) Techniques, Ultrasonic Examination, Radiography, Thermography, Eddy Current Method, Magnetic Particle Examination, Liquid Penetrant Method, Acoustic Emission Technique, Visual Inspection Techniques – Temperature Indicating Devices, Industrial Stethoscopes, Stroboscopes, Optical Inspection Instruments, Boroscopes, Endoscopes, Inspection Mirrors, Fibrescopes, CCTV, Special Purpose Inspection Methods – Crack Detection, Leak Detection, Corrosion Monitoring, Contaminant Examination – Debris Analysis, Spectrometric Oil Analysis Procedure (SOAP), Ferrographic Examination, Performance Trend Monitoring, Dynamic Analysis – Vibration Monitoring and Analysis, Shock Pulse Monitoring, Designing a Vibration Monitoring System, Vibration Trouble Shooting Charts, Initial Planning for Condition-based Maintenance System, etc.

- **Maintenance Budgeting, Costing and Cost Control (TB-13)**

Introduction, Advantages, Disadvantages and Problems in Budgeting, Essentials of Budgeting, Maintenance Budgeting, Planning and Presenting Maintenance Budget, Factors Influencing Maintenance Budget, Preparation of Maintenance Budget – Production Schedule Approach, Labour Allocation Approach, Integrated Approach, Maintenance Costing,

Case of Maintenance Costing System, Cost Codes for Maintenance Activities, Booking of Maintenance Costs, Budgetary Control, Z-charts for Budgetary Control, Maintenance Cost Control, etc.

- **Maintenance Information System, Performance Analysis and Control (TB-14)**

Concept of Control Function – Essentials of a Control System, Control of Maintenance Function, Objectives, Maintenance Efficiency, Effectiveness and Productivity Relationship, Reservations and Difficulties in Maintenance Control, Measurement of Maintenance Performance, Maintenance Performance Measurement Based on Numerous Indices, Limitations of Different Indices, Trend Analysis, Nippon Denso Method, Newbrough's Method, Corder's Maintenance Efficiency Index Method, Multi-stage Indicator Method, Multi-index Profile Method, Multi-factor Graph Method, Maintenance Audit, Maintenance Information System, etc.

- **Reliability, Maintainability and Availability (TB-15)**

Introduction to Reliability, Maintainability and Availability, Reliability and Total Life-cycle Costs, Reliability Definition, Reliability & Quality, Reliability Description, Factors Affecting Reliability, Reliability and Exponential Failure Law, Probability of Survival, Failure Rate, Mean Time Between Failures (MTBF), Reliability of a System – Series, Parallel and Mixed Configurations, Redundancy, Parallel & Standby Redundancy, Computation of Machine Failure Rates and Mean Time Between Failures (MTBF), Statistical Distributions, Reliability Prediction, Maintainability Concepts – Mean Time To Repair (MTTR), Design Considerations – Maintainability Prediction, Factors Affecting Maintainability – Design and Installation Factors, Reliability, Maintainability and Availability Relationship – Inherent Availability V/s Acquisition Cost, Effectiveness of a System, Approaches to Improve Reliability, Maintainability and Availability, etc.

- **Equipment Replacement and Investment Analysis (TB-16)**

Introduction, Need for Equipment Replacement, Provision of Assets, Concepts in Equipment Procurement Programme, Replacement Decisions, Investment Analysis – Time Value of Money, Compound Interest Factors, Quantitative Methods – Factors for Consideration – Service Life, Salvage value, Interest Rate, Rate of Return or Payback Period, Depreciation, Obsolescence, Tax, Insurance, Inflation, Annual Cost Method, Present Worth Method, Return on Investment Method, Discounted Cash Flow Method, Payback Period Method, Concept of Sunk Costs, MAPI Formula, Concept of Economic Life, Role of Maintenance in Plant Selection, Reliability and Maintainability Assessment of New Plant Equipment, Design Audit, Terotechnology in Plant Selection, Requirements of Purchase Contract – General Guidelines for Preparation of Plant Specifications, Contract Terms & Conditions, Equipment Installation and Commissioning, etc.

- **Machine Failure Analysis (TB-17)**

Classification of Failures, Failure Terminology, Fundamental Causes of Failures, Systematic Failure Analysis Programme, Detection of Faults/Failures – Trouble Shooting Charts, Fault Tree Analysis, Fault Location Logic Diagrams, Design-in and Design-out Maintenance, Mechanical Failures and Their Prevention – Fatigue Failure, Failure of Welded Joints, Brittle Fracture, Creep Failure, Common Electrical Problems and Their Prevention, Corrosion Failures and Cost of Corrosion, Corrosion Phenomenon – Mechanism of Corrosion, Forms of Corrosion, Corrosion of Building Materials, Corrosion Prevention – Modification in Materials and Design Specifications, Use of Protective Coatings, Change in Environmental Conditions, Corrosion Inhibitors, Electrochemical Protection – Cathodic Protection and Cases, Anodic Protection, Selection of Corrosion Control Techniques, Organizing Failure Analysis Programme – Reporting and Recording of Failure Data, Codification of Failures, Analysis of Failures – Modes, Frequencies, Downtime, Criticality, Causes, etc.

- **Machine Reconditioning/Rebuilding (TB-18)**

Introduction, Needs, Benefits and Limitations of Machine Reconditioning/Rebuilding, Economics of Reconditioning – Replacement V/s Reconditioning, Methods for Evaluating Economics, Maintenance and Repair Welding – Basic Steps, Eutectic Welding, Weldability, Surface Preparation, Preheating, Postweld Heat Treatment, Stress Relief, Preheating V/s Postheating and Surface Finishing, Typical Cases, Welding of Cast Iron and Dissimilar Materials, Reclamation of Worn and Damaged Parts – Repair of Surface Cracks, Insitu Repair Welding and Cases, Surfacing and Hard Facing, Surfacing Techniques – Powder Feeding Method, Metallizing Process, Flame Plating Method, Reclamation by Machining Processes, Metalock Method, Planned Reclamation Programme and Implementation, etc.

- **Value Analysis in Maintenance Functions (TB-19)**

Introduction, VA Definitions, Objectives & Benefits, Concept of Value – Use, Cost, Esteem & Exchange Values, Expression of Value, Comparison of Values, Terotechnology and Value Engineering & Value Analysis, Value Analysis Techniques – Defining Functions, Questioning Techniques, VA Checklists, Approach and Attitudes, Organizing Value Analysis Programmes – Selection of Projects, Job Plan – Information, Definition, Search, Evaluation and Execution Phases, Team Approach, VA Cases in Maintenance – Wire Ropes, Gland Packings, EOT Cranes, etc.

- **Safety in Maintenance (TB-20)**

Introduction, Causes of Accidents, Patterns of Accidents, Equipment Design and Safety, Role of Maintenance in Plant Safety, Basic Approach to Accident Prevention, Training and Motivation of Workers, Role of Supervisors, General Safety Guidelines, Concept of Total Loss Control, Risk Management – Identification of Risks, Assessment of Risks, Control of Risks, Disaster Planning, Controlling Industrial Hazards – Mechanical Hazards, Electrical Hazards – Static Electricity, Equipment Grounding, Toxic, Physical & Fire Hazards, Personal Protective Equipment, Organizing Safety Programmes – Safety Policy, Support of Top Management, Safety Organization, Safety Rules and Regulations, Communication Channels and Involvement of Employees, Safety Training, Safety Committees, Suggestion Schemes, Safety Audit and Correction of Safety Defects, Safety Appraisal, Accident Investigation, Equipment Damage Report, Safety in Maintenance Work, etc.

- **Spare Parts Management (TB-21)**

Introduction, Objectives and Functions of Inventory Control, Problems with Maintenance Stores, Consumption Patterns of Spare Parts, Classification of Maintenance Inventory, Maintenance Inventory Analysis and Selective Control – ABC, VED, SDE, HML, FSN and Other Analysis, Replenishing Systems – Ordering Cost, Inventory Carrying Cost, Order Quantity, Various Ordering Systems and Suitability for Spare Parts, Poisson's Distribution, Stocking Policies for Regular Items, Assurance Levels and Safety Stocks, Stocking Policies for Irregular Items – Capital & Insurance Spares, Spares Planning, Stores Organization, Codification of Parts, Records and Paper Work, Stores Layout, Location Addresses, Standardization/Variety Reduction, Management of Scrap, Obsolete and Surplus Items, Management of Non-moving Inventory (XYZ Analysis), Trends of Inventory, etc.

REGISTRATION

For registration to 'Practice-oriented Distance Training Certification Course in Maintenance Management', please forward the completed 'Registration Form' to IMME by email.

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SOME OF THE COMPANIES BENEFITTED FROM THE COURSE

Tens of Thousands of candidates from a large number of reputed companies in the corporate sector have participated in different training programmes & courses conducted by IMME in a period of over 30 years.

A few of the companies who participated in 'Practice-oriented Distance Training Certification Course in Maintenance Management' are shown below:

Andhra Cement Limited
Anil Starch Products Ltd., The
Aruna Sugars Ltd.
Ashok Leyland Ltd.
Asian Bearings Ltd.
Asian Cables & Industries Ltd.
Asian Paints (India) Ltd.
Assam Carbon Products Ltd.
Associated Alcohol & Breweries Ltd.
Associated Cement Cos. Ltd.
Atlas Copco (India) Ltd.
Autokast Limited
(A Govt. of Kerala Undertaking)
Bajaj Electricals Ltd.
Bata India Ltd.

Bharat Explosives Ltd.
Bharat Gears Limited
Bharat Petroleum Corpn. Ltd.
(A Govt. of India Enterprise)
Bhoruka Aluminium Ltd.
Bhoruka Steel Limited
Bihar Caustic &
Chemicals Ltd.
Bihar State Sugar Corpn. Ltd.
Birla Cement Works
Bombay Dyeing & Mfg.
Co. Ltd., The
Brakes India Ltd.
CFL Pharmaceuticals Ltd.
Cabot India Ltd.
Cadbury India Limited
Carborundum Universal Ltd.
Carrier Aircon Limited
Cellulose Products of India Ltd.
Century Spg. & Mfg. Co. Ltd.
Chemfab Alkalis Limited
Chennai Port Trust
Chirala Co-op. Spinning
Mills Ltd., The Chitavalsah
Jute Mills
Coromandel Cements Ltd.
Cosmo Ferrites Limited
Cosmo Films Ltd.
Crompton Greaves Ltd.
Damodar Valley Corporation
Deepak Fertilisers &
Petrochemicals Corpn. Ltd.
Deepak Nitrite Ltd.
Denso India Ltd.
Dhampur Sugar Mills Ltd.
Dharamsi Morarji Chemical
Co. Ltd., The
Diamond Cements
Drillco Metal Carbides Ltd.
Durgapur Projects Ltd., The
(A Govt. of West Bengal
Undertaking)
E.I.D. Parry (India) Ltd.
Echjay Industries Limited
Eicher Tractors
Electro Steel Castings Ltd.
Eltex Super Castings Ltd.
Escorts Limited
Ester Industries Limited

Eveready Industries India Ltd.
Exide Industries Limited
Facor Alloys Limited
Fenner (India) Limited
Fenner & Company Ltd.
Gabriel India Ltd.
Gajra Bevel Gears Ltd.
Garware Polyester Ltd.
Gharda Chemicals Ltd.
Godrej & Boyce Mfg. Co. Ltd.
Gontermann-Peipers (India) Ltd.
Goodlass Nerolac Paints Ltd.
Graphite India Ltd.
Grasim Industries Ltd.
Gujarat Poly-AVX Electronics Ltd.
Haryana Sheet Glass Ltd.
Hilton Rubber Ltd.
Hindalco Industries Ltd.
(Renusagar Power Division)
Hindustan Construction Co. Ltd.,
The
Hindustan Gas & Industries Ltd.
Hindustan umilever Limited
Hindustan Petroleum Corpn. Ltd.
(A Govt. of India Enterprise)
ITC Limited
Inarco Limited
Incab Industries Limited
India Glycols Limited
India Pistons Limited
Indian Farmers Fertiliser
Co-operative Ltd.
Indian Ordnance Factories
(Ministry of Defence –
Govt. of India)
Indian Smelting & Refining
Company Ltd., The
Indian Sugar & General
Engineering Corporation
Indo Rama Synthetics (I) Ltd.
Indoco Remedies Limited
Indiapistons-Repco Limited
Ingersoll Rand (India) Ltd.
JK White Cement Works
Jyoti Limited
K.C.P. Limited, The
Kalyani Seamless Tubes Ltd.
Kalyani Spinning Mills Ltd.
(A Govt. of West Bengal
Undertaking)
Kalyani Steels Ltd.
Kandla Port Trust
Kesoram Industries Ltd.
Kesoram Rayon
Kirloskar Brothers Ltd.
Kirloskar Electric Co. Ltd.
Kirloskar Pneumatic Co. Ltd.
Lakshmi Machine Works Ltd.
Larsen & Toubro Limited
Lohia Starlinger Limited
Lucas-TVS Ltd.
Lyka Labs Limited
M.J. Pharmaceuticals Ltd.
MRF Limited
Maharashtra Seamless Ltd.

Mahindra & Mahindra Ltd.
Mineral Exploration Corpn. Ltd.
Motor Industries Co. Ltd.
Mysore Paper Mills Ltd.
Nagarjuna Fertilizers & Chemicals
Ltd.
Nuclear Power Corporation of India
Ltd.
(A Govt. of India Enterprise)
Orient Cement
Orient General Industries Ltd.
Orient Paper Mills
Oswal Spg. & Wvg. Mills Ltd.
Paharpur Cooling Towers Ltd.
Panyam Cements and Mineral
Industries Ltd.

Phillips Carbon Black Ltd.
Premier Breweries Limited
Pudumjee Pulp & Paper Mills Ltd.
Punjab Khand Udyog Ltd.
Rajashree Polyfil
(A Divn. of Century Enka Ltd.)
Rallis India Limited
Ralson (India) Limited
Ranbaxy Laboratories Ltd.
Raunaq Automotive Components
Ltd.
Reckitt Benckiser (India) Ltd.
Regency Ceramics Ltd.
Reliance Industries Limited
Reliance Jute & Industries Ltd.
S.R.P. Tools Ltd.
Saurashtra Cement & Chemical
Industries Ltd.
Siemens Limited
Sirpur Paper Mills Ltd., The
Sterlite Technologies Limited
Stumpp, Schuele & Somappa Ltd.
Sudarshan Chemical Industries
Ltd.
Sun Pharmaceutical Industries Ltd.
Sundram Fasteners Ltd.
Sunflag Iron & Steel Co. Ltd.
Surya Roshni Limited
Tata Chemicals Limited
Tata Metaliks Ltd.
Tega Industries Ltd.
Thermax Limited
Thiru Arooran Sugars Ltd.
Upper Ganges Sugar & Industries
Ltd.
Utkal Asbestos Limited
Tuticorin Spinning Mills Ltd.
USV Pvt. Limited
Universal Cables Ltd.
Vadilal Industries Ltd.
Vindhya Telelinks Limited
Voltas Limited
Warren Tea Limited
Wheels India Limited
Wipro Limited
Wockhardt Health Care Limited
XLO Machine Tools Ltd.
Yashwant Iron & Steel Works
Zenith Limited