

# SKF Training Solutions

Optimize the Rotating Equipment Performance through precision and proactive maintenance practices



Maintenance strategy



Condition monitoring



Spare optimization



Bearing installation



Lubrication and contamination



Alignment and balancing



Root cause analysis



Continuous improvement

# Welcome to the World of SKF

*Our Training Handbook encompasses a wide range of courses to support you in developing a successful training program for your employees.*



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*We can arrange a training program as per your convenience, ranging from asset management to basic maintenance skills. SKF Training Solutions team can even develop a customized training program for you and your team.*

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Equip your people – Deliver results...To leverage invested capital in machinery and equipment, it is essential that an organization continuously invests in its people to increase efficiency and productivity. SKF Training Solutions team offers a comprehensive structure of reliability and maintenance training courses designed to help plants reduce machinery problems and achieve maximum reliability and productivity. Our courses focus on enhancing the efficiency of plant machinery and equipment assets, which are integral to the production process.

The training courses are based on a century of experience and knowledge of rotating machine reliability that is unmatched in the world. With close working partnerships, established over the years, we have gained a unique insight into the processes and challenges that most of the major industries face today.

Our partnership with global certification councils along with educational institutions in India will empower your staff with the knowledge of emerging technologies in the field of engineering, especially concerning with rotating equipment management. With exhaustive training sessions that involve 'hands-on' learning experience, your employees will be equipped with SKF knowledge that will enable them to become highly skilled technicians to add value to your business.

Please refer to this calendar that will give you all the information on this year's courses and do connect with us to deploy them for your teams. We wish you an enjoyable learning experience!

Best Regards

**Katyayni Kumar**

Head: Solutions Factory & SKF Training Solutions  
Industrial Business  
SKF India Ltd.

# Importance of Training

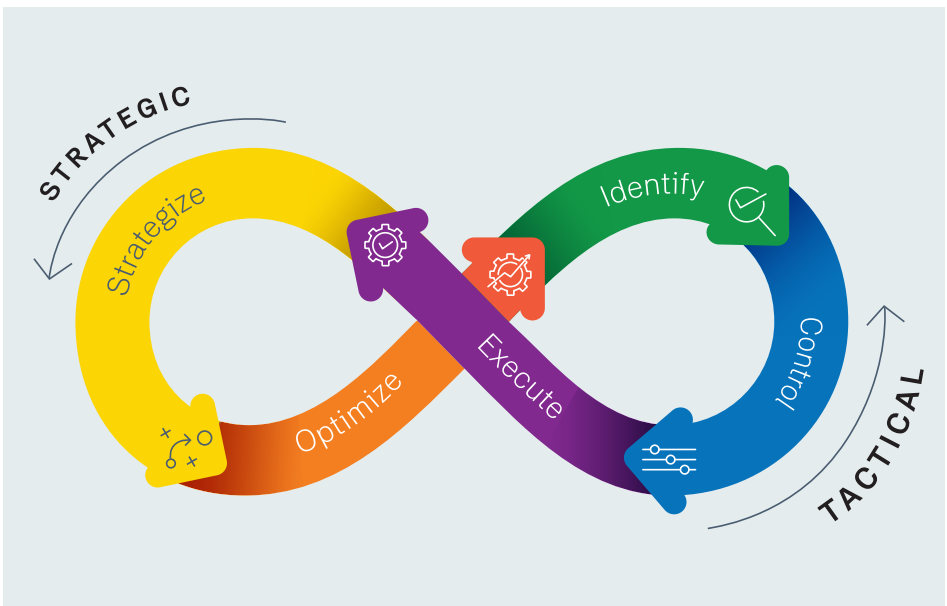
Training – A cost effective investment. Delivering the highest quality goods at the best value requires highly skilled employees and optimum machine reliability. Meeting increasingly stringent safety and environment regulations can also affect your operational costs. These factors make maximizing machine reliability and maintenance costs crucial. But training your team on these critical skills as they juggle daily tasks is quite difficult. With SKF training courses, it's never been easier.

Equip your people – Deliver results... To leverage your invested capital in machinery and equipment, it is essential to continuously develop the skills in your people to increase efficiency and productivity. SKF offers a comprehensive structure of reliability and maintenance training courses designed to help plants

reduce machinery problems and achieve maximum reliability and productivity. The training covers most aspects of industrial requirements. It includes courses on Mechanical and Electrical Maintenance, Condition Monitoring, Planning and Strategy, Business and Manufacturing Excellence, etc.

Available on your terms...

SKF Training Solutions team can work with you to arrange a training program as per your convenience. From asset management to basic maintenance skills, SKF Training Solutions team can develop a customized training for you and your team. We have a full schedule of training courses held at a variety of locations across the country or we can bring our classes to your site.



# 5 Key Steps to Achieve Successful Training Results

## Step 1: Select appropriate work category

### Understanding the maturity levels

Drawing on years of SKF productivity experience,

we can help you to identify improvement opportunities that will yield positive bottom-line results, then suggest a strategy for implementing a program to achieve them. The SKF Client Needs Analysis is a performance benchmarking process with proven success in many industries.

After the completion of the analysis, you will receive a comprehensive report that includes:

- A summary of initial set-up details
- A spider chart illustrating a micro-level assessment for each question versus the maturity phases
- A maturity summary matrix showing a macro-level assessment for all four main facets of the asset efficiency optimization process versus the maturity phases
- A ranked deviation chart illustrating your performance question -by-question versus your industry averages
- A detailed roadmap of recommendations for improving plant reliability

## Step 2: Training needs analysis

### Identify the competence gap

The shift to a fully integrated, reliability and risk-based asset management

strategy starts with a good initial understanding of where your staff is today and where your staff needs to be to attain optimum plant understanding, combining our experience in training and knowledge of maintenance and reliability.

TNA is conducted with individuals or a group of your staff from work areas, such as: Managers, Superintendents / Supervisors, Engineers and Technicians. Opportunities for improvement are determined when Training Needs Analysis is analysed. Typical improvements fall in the following areas:

1. Bearing and seal technology
2. Power transmission
3. Lubrication
4. Oil analysis
5. Vibration analysis
6. RCA/RCFA
7. Maintenance strategy
8. Thermography

The results obtained through a well-designed online questionnaire will include:

- Individual work profile
- Spider chart showing competency gap in key assessment areas
- Skill summary matrix
- Detailed proposal of training recommendation

# 5 Key Steps to Achieve Successful Training Results

## Step 3: Blended learning Develop customized trainings Course levels

The SKF Training courses focus on disseminating maintenance related knowledge worldwide. It offers various programs that are developed for easy applications.

### Basic

E-learning modules delivered online, 24/7 at SKF Knowledge Centre. Introductory courses familiarize participants with basic terms and offer basic training on subjects such as bearings, lubrication, thermography and more.

### Level 1

Classroom courses taught by SKF specialists at customer locations or SKF facilities. A combination of theory and hands-on instruction. Intermediate courses typically last 2-3 days.

### Level 2+

Classroom courses taught by SKF specialists or external experts at customer locations or SKF facilities. Advanced courses typically last 3-5 days.

### Course categories

The SKF training courses are organized to match the following workflow process:

- Maintenance Strategy
- Workflow Identification (WI)
- Work Control (WC)
- Work Execution (WE)
- Living Program (LP)

## Step 4: Measure training effectiveness

### Ensure what is learned transfers to on-the-job behaviours

Training implementation support program SKF can assist you to build a training implementation support program which could include the following:

- Development of detailed work packages for critical tasks on critical assets
- Identification of specific tooling requirements related to the tasks that assists and support team members in securing the same and facilitate training on the special tools required
- Train members on task execution based on the developed work packages and the delivered technical training
- Mentor team members through audits and assessments of task execution to embed and perpetuate best maintenance practice

## Step 5: Work category

Re-assessment continuous improvement and re-enforcement of skills matrix SKF recommends customers to identify new improvement opportunities and make it a part of a continuous process.

Key to success are as follows:

- A corporate culture willing to embrace the need for change
- Commitment to implementing new technologies with requisite financial, training and personal resources
- Willingness to support processes for implementing cultural and technology changes

Eliminates re-work and machinery problems to increase reliability and productivity

Helps prevent catastrophic failures before they happen by identifying the early symptoms

Minimizes repeated failures by addressing the root causes

## Benefits of Training



Enhances plant safety

Aids in the recruiting process by making the company more attractive in the eyes of potential employees

Reduces turnover as employees are less likely to leave if they keep learning new skills and keep up within their industry

Increases employee productivity by teaching them advanced techniques to complete everyday tasks more efficiently

Rewards long-time employees who have learned new skills and are ready to take on new challenges

Reduces the need for employee supervision

## WHAT OUR CLIENTS SAY

VALUED  
FEEDBACK  
FROM OUR  
CLIENTS



ADITYA BIRLA GROUP

This session is too good, and definitely helps us to apply basic knowledge to bearings. Good learning experience with highly interactive session.

This is a very good learning session for a new maintenance strategy.

**Hindalco Industries Ltd.**

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IndianOil

Program was well structured; Instructor was very supportive and cordial. Boarding and Lodging arrangement was excellent. Had a great learning time. Well done and keep it up. Had a lot to learn from the training program and will try to implement with more judiciary.

**Indian Oil Corporation Ltd.**

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Training was very informative. The session was very good and fruitful to enhance our knowledge to improve the efficiency of plant and machinery.

The knowledge level and the depth of the trainer were just extraordinary.

**Times of India**

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Holcim

We got lot of values due to this training programme, It is very advantageous for our day-to-day work. This training was very helpful for me to update my knowledge and it is useful for my future career.

**Holcim (Lanka) Ltd.**

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The program is very informative. I liked the content. The program faculty is also very good. This training should be initiated time to time for our people.

Learning will be used at my work-place.

**Steel Authority of India Limited**

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The training was very good and relevant to our job and usable to our day to day maintenance work. A good interactive course with proper management by learning centre. BMT 3-day training with quality knowledge sharing by trainer which is going to help me throughout the life. Thank you.

**Reliance Industries Limited**

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The training proved to be very insightful and enlightening about vibration analysis.

The entire faculty has excellent knowledge on the above subject and with their past field experience on vibration monitoring, they delivered and shared very informative and useful lectures during the subject training.

**Oil and Natural Gas Corporation**

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Training instructor as well as the manuals given were useful. Live examples were shared, animated ideas were shown for better understanding, and overall the session was Brilliant.

**Oil and Natural Gas Corporation**

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This session is too good and definitely helps us to apply basic knowledge to bearings. Overall session is very good. I met all my expectations which I wanted to from RCA (Root Cause Analysis) Training. Enjoyed the facility provided by SKF. Also the techniques which are provided by the instructor are very useful.

**Corning Technologies India Private Limited**

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**thyssenkrupp**

It is well balanced course. Gave a clear cut idea of bearing basics. Today knowledge about bearing is more helpful in the industry. Proper way of mounting and dismounting is more important which I got from SKF.

**ThyssenKrupp Industries India Pvt.**

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# Faculty Profile



## Katyayni Kumar

18+ yrs of experience as a functional expert in the fields of: **TPM | Maintenance Excellence | Maintenance Health Assessment**. Lean Six Sigma Black Belt certified with delivering 10,000+ hours of professional training.

## Kumaran Dakshinamurthy

Kumaran is a Mechanical Engineer, **ASNT Level 2 & BINDT Category-2 Certified Vibration Analyst**. Being the finest expert SKF has for training, with rich experience of 27+ yrs in the fields of: **Condition monitoring | Dynamic analysis** with delivering 25,000+ training hours.



## Vijay Apte

Vijay has over 33+ yrs of experience as a functional expert and hands-on experience in the fields of: Maintenance, bearings and services ranging from **Plant Health Assessment | Condition monitoring of equipment | Mechanical services** in various key industrial segments like power, metals, pulp, paper and cement. SKF Certified Six Sigma Green Belt with delivering more than 25,500+ hours of professional training.

## Vivek Choudhary

Vivek is a M. Tech. in Industrial Engineering and Management from IIT Kharagpur, with 8+ yrs in SKF as Application Engineer with OEM customers in segments like: **Machine Tool | Medical | Material processing | Food and Beverage | Printing | Textiles and off-highway**. Currently working with IMSM key accounts team.



# Faculty Profile



## Akash Singha Roy

Akash Singha is a B.Tech with a strong domain knowledge of Bearings Maintenance and Application Engineering. **GATE Qualified** with strong subject knowledge of Applied Mechanics & Design, Fluid Mechanics & more. Previously worked as Mechanical Design Engineer for 3.5 yrs in Ipsen, Kolkata/Germany (Industrial, atmosphere, vacuum furnace manufacturers for Heat Treatment).

## Manjeet Singh

Manjeet has over 22+ years of experience as a maintenance expert and hands-on experience in the fields of: bearing maintenance, Mechanical and Roll Shop Services in key industrial segment Like metals. He delivered 500+ hours trainings in maintenance.



## Satish Mishra

Satish is a B. Tech. Mechanical Engineer with 12+ yrs of experience in Application Engineering, pursuing M. Tech. in Energy Management. Expert in Solution offering for Reliability Improvement, Technical Services, Bearing Analysis, Bearing and Lubrication optimization, and Bearing downsizing. Worked in industry segments viz. pulp & paper, power, cement, mining, food and beverage, chemical, industrial OEMs like motor, gearbox manufacturers. Has delivered various trainings on Bearing Technology.

## Avataram Yarra

Avataram Yarra is a B. Tech. Mechanical Engineer and ASNT Level-2 certified vibration analyst. He's an expert in Predictive Maintenance and reliability services, Online Monitoring through Cloud based IoT Technology at SKF, with 12+ yrs of experience in the field of: Condition monitoring | Laser alignment | In-site dynamic balancing | Thermography | Dynamic analysis.

Have worked in different key segments and industries like:  
Pulp and Paper | Automobile | Cement | Iron and Steel | Oil and Gas | Sugar | Power and more.



# Faculty Profile

## Manas Khatau

Manas is a B.Tech. in Mechanical Engineer with 19+ yrs of experience spent in the fields of manufacturing, quality, design, production, maintenance, sales and service. Along with metal industries, mining – iron and coal, cement and power, food and beverage and automobile sector. Currently handling the power transmission and seals platform.



## Abhinandan Mujumdar

Abhinandan Majumdar is a B.E. (honors), Mechanical Engineer, formerly worked as Process Engineer in Roll Grinding & Bearing Shop of Tata Tinsplate CRM (5 yrs) and Technical Office Engineer at Schaeffler India (10 yrs). Presently an Application Engineer in SKF India (1 yr). Experienced in Bearing Technology associated with various machinery in Steel, Cement, Power and Machine Tool Plants with 8+ yrs of experience as a faculty for Trainings in Rolling Bearing Technology.

## Arun Kalyana Rajan Shenbakamurthy

Arun hold 27 years experience in the industry and has been working with SKF for last 19 years. | He is certified by British Non-Destructive Testing( BINDT) Category II | Arun has completed B.E. Mechanical & He is an ISO certified trainer for Vibration Analysis Level-I & Level-II | He has experience in all major segments like Paper, Cement, Automobile, Refinery, Railway, Wind, etc.



## Prashant Aourasang

Prashant has over 5+ years of experience in bearing industry in terms of application analysis, bearing selection, bearing damage analysis, troubleshooting. He has hands-on experience in the above fields in key industrial segments like drives, power, metals, pulp and paper and cement.

# Bearing Maintenance Technology – WE201

## COURSE OBJECTIVE

*Goal of this course is to provide the participants with the knowledge and practical skills to select the best bearings for applications. Learn world's best practice in bearing, fitting and dismantling from engineers using the correct fitting and removal tools and techniques. This will improve reliability of the rotating equipment.*

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Application Engineer, Condition Monitoring Engineer / Design Engineer, Maintenance Engineer / Manager / Supervisor, Quality Engineer, Reliability Engineer / Manager / Supervisor

### Prerequisite:

A fundamental knowledge and ability to use basic hand tool is required.

### Course information:

Duration: 3 days

**Course Fee: INR 23,400/-**  
plus GST (per participant)

**Max. Participation: 15**

### Course contents:

- Basics of bearings
- Ball bearing types
- Roller bearing types
- Bearing selection criteria
- Bearing life calculation
- Selection of fits and tolerance
- Bearing lubrication
- Mounting and dismantling
- Introduction to bearing failures and their causes
- Bearing storage and handling
- Maintenance tips

### Course schedule:

Location	Date
Pune	29, 30 & 31 Jan 2024
Pune	9, 10 & 11 Oct 2024

# Basics of Rotating Machinery – WE202

## COURSE OBJECTIVE

*How to improve the service life of machinery with rotating equipment systems. It focuses on most common rotating equipment such as motors, fans, pumps and gearboxes.*

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Application Engineer / Condition Monitoring Engineer / Design Engineer / Maintenance Engineer / Manager / Supervisor Quality Engineer, Reliability Engineer / Manager / Supervisor

### Prerequisite:

- A fundamental knowledge and ability to use basic hand tool is required
- At least one year experience in maintenance

### Course information:

Duration: 3 days

**Course Fee: INR 23,400/-**  
plus GST (per participant)

**Max. participation: 15**

### Course on request

### Course contents:

#### Part 1: Industrial motors

- Bearing arrangements
- Friction
- Sealed-for-life lubrication
- Shaft and housing fits
- Mounting and dismounting
- Troubleshooting

#### Part 2: Industrial pumps

- Bearing arrangements
- ANSI vs. API design overview
- Pump bearings
- Cavitation
- Off-BEP operation
- Low bearing service life

#### Part 3: Industrial fans

- Bearing arrangements
- Controlling heat expansion
- Lubrication of fans
- Mounting and dismounting
- Grease selection: basics
- Case studies

#### Part 4: Industrial gearboxes

- Bearing arrangements
- Static, splash and circulating oil lubrication
- Lubricant selection
- Extending gearbox service life

# Lubrication in Rolling Element Bearing – WE204

## COURSE OBJECTIVE

*The objective of this course is to provide the knowledge and skills necessary to resolve lubrication, cleanliness, and sealing issues in order to extend bearing service life. Upon completion of this course, attendees will be able to understand the principles of bearing life, understand the basics of lubrication theory and the effect of lubrication and contamination on bearing life.*

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Application Engineer / Condition Monitoring  
Engineer / Design Engineer / Maintenance  
Engineer / Manager / Supervisor / Quality  
Engineer / Reliability Engineer / Manager / Supervisor

### Prerequisite:

Basic machine maintenance skills and experience.

### Course information:

Duration: 2 days

**Course fee: - INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

### Course contents:

- Basics of bearings
- Lubrication theory
- Selection of proper lubricant (oil and grease)
- Contamination and cleanliness
- Sealing
- Bearing service life
- Lubrication systems

### Course schedule:

Location	Date
Pune	8 & 9 August 2024

# Sealing Solutions Technology

## COURSE OBJECTIVE

*This course is designed to develop knowledge of industrial sealing products for rotary and reciprocating motion, application fundamentals and competence in devising effective sealing solutions.*

*The information and training will enable students to understand the concepts and application of sealing solutions to achieve optimum seal, bearing and equipment performance.*

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Machinery Designers / Reliability Engineers / Maintenance Engineers and Technicians / Consultants

### Course information:

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. participation: 15**

### Course contents:

- To provide the participants with the fundamentals of rotary and reciprocating seals, principles of sealing operations, elastomeric materials and their properties, and the effects of operating parameters in seal performance
- To have an understanding of the various seal designs, their applications and seal design development trends
- To learn a systematic approach to “sealing system failure analysis”, most common failure modes; includes participation in actual case studies
- To provide an overview of common sealing components used in various industrial applications and a guide to sealing system designs in heavy industry segments
- To learn appropriate handling and installation procedures, methods, tools and parameters; includes a workshop environment for hands-on experience
- To provide an overview of other sealing systems and services including SKF custom sealing solutions

### Course schedule:

Location	Date
Pune	29 & 30 April 2024
Pune	12 & 13 Sep 2024

# Root Cause Bearing Damage Analysis – WE204

## COURSE OBJECTIVE

*Goal of this course is to provide the participants with the competence to give optimal support to users in solving their problems, by gaining:*

- 1. Thorough understanding of the various bearing failure phenomena and the ability to co-ordinate the necessary actions for failure analysis.*
- 2. Skills to provide an appropriate proposal to eliminate, or at least reduce the bearing failure problem.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Application Engineer / Maintenance Engineer / Supervisor, Quality Engineer, Reliability Engineer

### **Prerequisite:**

Basic knowledge of bearings and their applications

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST(per participant)

**Max. participation: 15**

### **Course contents:**

- Review on bearings and their application
- Load path patterns
- ISO 15243–bearing failure modes and classification
- Methodology
- Exercise on bearing failure study
- How to identify spurious and reconditioned bearings

### **Course schedule:**

<b>Location</b>	<b>Date</b>
Pune	7 & 8 Nov 2024

# Precision Shaft Alignment - WE240

## COURSE OBJECTIVE

- Learn the reasons and definitions of alignment and misalignment
- Discuss types of misalignments, including angular, offset, horizontal and vertical
- Understand the steps and procedures required to inspect and prepare a machine prior to alignment, including alignment tools and methods
- Learn the list of proactive steps taken to ensure a successful alignment process
- Practice discussed mechanical, dial and laser alignment methods
- Understand the mechanical and laser technique

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Service, Maintenance, Machine Repair or Plant / Facility Engineering Staff of an Industrial or OEM Facility

### Prerequisite:

Basic machine maintenance skills and experience. General computer and calculating skills are helpful.

### Course information:

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. participation: 15**

### Course contents:

- Introduction to shaft alignment
- Alignment definitions
- Pre-alignment checks
- Soft foot
- Rough alignment
- Alignment moves for precision and problem solving
- Alignment methods
- Hands-on laser alignment

### Course schedule:

Location	Date
Pune	13 & 14 Jun 2024
Pune	19 & 20 Sep 2024

# Electrical Motor Certification Training – WE 231

## COURSE OBJECTIVE

*Attendees will learn best practices for electric motor bearing service and repair.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Service, Maintenance, Machine Repair or Plant / Facility Engineering Staff of an Industrial or OEM Facility

### **Prerequisite:**

Basic machine maintenance skills and experience. Basic knowledge of bearings and electrical motors.

### **Course information:**

Duration: 1 day

**Course fee: INR 8,000/-**  
plus GST (per participant)

**Max. participation: 15**

**Course on request**

### **Course contents:**

- Bearing arrangements in electric motors
- Motor teardown and bearing dismounting
- Shaft and housing fits
- Motor assembly and bearing mounting
- Lubrication
- Post service procedures
- Most common bearing failures

# Fundamentals of Electrical Equipment Maintenance

## COURSE OBJECTIVE

*Goal of this course is to review fundamentals of motors, generators, cables, switchgears, power and distribution transformers, along with their construction, Installation, commissioning testing and maintenance.*

*This course will cover the latest maintenance trends and diagnostics testing.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Electrical Manager / Application Engineer, Design Engineer

### **Prerequisite:**

Basic knowledge of electrical equipment and experience in maintenance will be helpful.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. participation: 15**

**Course on request**

### **Course contents:**

- AC Motor / Generator: Construction and types, installation, commissioning and maintenance test
- Power cable: Construction, installation, commissioning and diagnostic testing
- Cable fault detection
- Power and distribution transformers: Construction, installation, commissioning and diagnostic testing
- Switchgears: Construction, installation, commissioning and diagnostic testing

# Advanced Condition-Based Maintenance of Electrical Equipment

## COURSE OBJECTIVE

*The Participants will learn about various diagnostic testing methods like: Offline and online testing, high level test like motor current and torque signature, acoustic emission, surge testing (IEEE522), tan delta and capacitance measurement, partial discharge measurement, dielectric response analysis. The latest VLF (Very Low Frequency) HIPOT will be discussed in comparison to DC HIPOT and AC HIPOT Testing as per IEEE 433.*

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Electrical / Manager / Supervisor, Application Engineer, Condition Monitoring Engineer, Design Engineer, Maintenance Engineer / Manager / Supervisor / Reliability Engineer / Manager / Supervisor

### Prerequisite:

Basic knowledge of electrical equipment and experience in maintenance will be helpful.

### Course information:

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. participation: 15**

### Course on request

### Course contents:

#### Part I: Power cable

- Fundamentals of cable construction
- Commissioning testing / acceptance tests at site
  - Diagnostic testing
    - a. Insulation resistance test
    - b. Polarization index
    - c. Tan delta and capacitance measurement
    - d. Partial discharge measurement
- Low frequency testing

#### Part II: Transformers

1. Fundamentals of transformers
2. Acceptance tests
3. Various diagnostic testing
4. Online and offline testing and monitoring

#### Part III: Motors and generators

- Fundamental of motors, generators and its construction and type
- Online testing for condition monitoring
- Offline testing to assess the condition of the motors
- Interpretation of the test results

# Introduction to Non-Destructive Testing

## COURSE OBJECTIVE

*This course will help in selection of NDT methods for different products like forging, rolling, casting, welding, machine and used components.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Condition Monitoring Engineer /  
Electrical Engineer / Manager /  
Supervisor Engineering Manager /  
Supervisor Engineering Manager

### **Prerequisite:**

Minimum 2 years of experience in maintenance, production, planning and condition monitoring in any industry.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. participation: 15**

**Course on request**

### **Course contents:**

- Introduction to NDT
- Discontinuities associated with different manufacturing processes
- Principal, applications and limitations NDT methods:
  - Liquid penetrant examination
  - Magnetic particle examination
  - Ultrasonic examination
  - Visual examination
  - Radiography examination

# Basics of Thermography

## COURSE OBJECTIVE

*This course is geared to equip the new user of thermography camera for a variety of condition monitoring and predictive maintenance applications.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Condition Monitoring Engineer /  
Electrical Engineer / Supervisor,  
Engineering Manager / Mechanical  
Maintenance Engineer / Supervisor,  
Reliability Engineer / Supervisor,  
Operations Manager / Supervisor

### **Prerequisite:**

Minimum 2 years of experience in any industry.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. participation: 15**

**Course on request**

### **Course contents:**

- Basic theory of thermography
- Thermal science fundamental
- Basic camera setup and operation
- Heat transfer and infrared science
- Thermal measurement
- Application of thermography
- Hands-on use of thermal imaging equipment

# Vibration Analysis Level 1 – WI201

## COURSE OBJECTIVE

- *To highlight the urgent need for problem diagnostics and implement practical solutions through vibration analysis.*
- *Bring to focus the importance of condition monitoring to improve availability of operating machines, scientific problem diagnostics and effective maintenance methodologies.*
- *This course will help you to identify machinery problems and to find cost effective solutions.*

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Service, Maintenance, Condition Monitoring, Machine Repair or Plant / Facility Engineering Staff of an Industrial or OEM facility

### Prerequisite:

Basic machine maintenance skills and experience. General computer and calculating skills are helpful.

### Course information:

Duration: 2 days

**Course fee: INR 23,400/-**  
plus GST (per participant)

**Max. participation: 15**

### Course contents:

- Basics of condition-based maintenance
- Fundamentals of machinery vibration
- Vibration standards for various equipment according to ISO 10816
- Instrumentation: Sensor types, mounting methods and applications
- Practical with FFT analyzer on demonstration rig
- Establishing vibration measurements
- Spectrum analysis
- How to analyse 'typical' machinery problems
- Group work and case studies

### Course schedule:

Location	Date
Pune	27, 28 & 29 Feb 2024
Pune	11 & 12 July 2024
Pune	29, 30 & 31 Oct 2024

# Vibration Analysis Level 2 – WI202

## COURSE OBJECTIVE

*Bring to focus the importance of condition monitoring to improve the availability of operating machines, scientific problem diagnostics and effective maintenance methodologies. To highlight the urgent need for problem diagnostics and implement practical solutions by vibration analysis.*

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Service, Maintenance, Condition Monitoring, Machine Repair or Plant / Facility Engineering Staff of an Industrial or OEM facility

### Prerequisite:

Vibration analysis level-1 WI201 or previous experience in vibration required. General computer and calculating skills are helpful.

### Course information:

Duration: 3 days

**Course fee: INR 23,400/-**  
plus GST (per participant)

**Max. participation: 15**

### Course contents:

- The basics of condition-based maintenance
- Fundamentals of machinery vibration (Brief review of vibration analysis level 1)
- ISO 10816 standards for different equipment
- Signal processing and data acquisition
- Vibration signature analysis
- Phase analysis
- Practical's with FFT analyzer on demonstration rig
- Machinery fault diagnosis
- Corrective actions
- Case studies and discussion

### Course schedule:

Location	Date
Chennai	12, 13 & 14 March 2024
Pune	20, 21 & 22 March 2024
Goa	10, 11 & 12 April 2024
Ahmedabad	14, 15 & 16 May 2024
Pune	28, 29 & 30 August 2024
Pune	11, 12 & 13 Dec 2024

# Machinery Lubrication and Oil Analysis

## COURSE OBJECTIVE

*With hundreds of lubricant types, base stocks, additive packages and viscosity grades to choose from, how a person can decide which lubricant is right for a machine. After attending these courses, you will be empowered with the knowledge to understand the important lubricant properties and how to strategically select the correct lubricant for each machine application.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Application Engineer, Condition Monitoring Engineer, Engineering Manager / Supervisor / Mechanical Maintenance Engineer / Manager / Supervisor / Reliability Engineer / Manager / Supervisor

### **Prerequisite:**

Basic machine maintenance skills and experience.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. participation: 20**  
**Course on request**

### **Course contents:**

- Maintenance strategy
- Lubrication theory
- Lubricant formulation
- Grease application and performance
- Lubricant selection
- Lubricant application
- Lubricant condition control
- Lube storage and management
- Oil analysis

# Pump and Motor Health Management

## COURSE OBJECTIVE

*Attendees will be able to understand about Motor Basics & Bearing Arrangement, Pump Basics & Bearing Arrangement, Lubrication Basics & Bearing Life calculation etc. his training help attendees understand maintenance techniques of pump and motor.*

### **Assessments-**

Entry Test & Exit Test with Multiple choice questions.

### **Recommended for:**

Service, maintenance, machine repair, Managers, and technicians  
Rotating equipment engineers, reliability engineers and maintenance supervisors.

### **Prerequisite:**

Experienced professionals from industry.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. participation: 15**

### **Course contents:**

- Bearing basics
- Bearing types, Ball Bearings & Roller Bearings
- Lubrication Basics & Bearing Life calculation
- Mounting and dismounting tools
- Discussion, review
- Motor Basics & Bearing Arrangement
- Motors Bearing Lubrication, Handling & Solutions
- Pump Basics
- Bearing Arrangement, Mounting & Handling
- Pump Bearing Failure mode and Solutions

Course on request

# Introduction to Lubrication Systems – Basic Level

## COURSE OBJECTIVE

*To equip our design, sales, service, maintenance, machine repair or plant engineering staff from various mechanical and OEM industries all over the world to have the knowledge and importance of:*

- *The right lubricant*
- *In the right amount*
- *With the right lubrication system*
- *At the right time*
- *At the right lubrication point*
- *Highlights on lubrication possibility even in machine running condition - improved equipment availability*
- *This program helps in saving time – with optimum manpower utilization*
- *Understanding about better lubrication system that can be achieved, when the components of systems are in motion*
- *To equip technical people on how lubrication can help in saving energy*

### **Principle:**

Small quantities of lubricant fed at more frequent intervals achieve better lubrication compared to large quantities fed at less frequent intervals.

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Design, Sales, Service, Maintenance, Machine Repair or Plant / Facility Engineering Staff of an Industry

### **Prerequisite:**

Basic mechanical knowledge, general computer and calculating skills.

### **Course information:**

Duration: 4 days

**Course fee: INR 31,200/-**  
plus GST (per participant)

**Max. participation: 15**

**Course on request**

### **Course contents:**

- Why lubrication systems?
- Basic lubricants preferred
- The basics of Lubrication Systems (LS)
- Taxonomy of Centralized Lubrication Systems (CLS)
- Components used in CLS and its function and importance
- Principle of CLS with industrial examples
- Operational theory behind each CLS
- Benefits of CLS
- Lincoln manufacturing CLS (In brief: ref: Advance level) and its industrial application / benefits

# Bearing Maintenance Practices and Failure Analysis

## COURSE OBJECTIVE

*The course is designed to develop understanding of parameters required to be considered during servicing and maintenance of rotating equipment like gearbox, fan, pumps, motors as well as material handling equipment. Along with the right practices, by the completion of the course, candidate will understand about how to analysis the failed bearing and point out reasons for equipment failure.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Service, maintenance, reliability engineers from O&M divisions.

### **Prerequisite:**

Basic mechanical knowledge, general computer and calculating skills.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

**Course on request**

### **Course contents:**

- Bearing basics
- Ball and roller bearing used for rotating equipment
- Bearing designations
- Bearing arrangements
- Factors affecting bearing service life
- Lubrication practices
- Mounting and dismounting guidelines and shaft condition
- Need of bearing damage analysis
- How to perform 'Bearing Damage Analysis'
- Making a RCFA report
- New solutions

# Machine Condition Monitoring

## COURSE OBJECTIVE

*The course is designed to develop understanding of parameters required to be considered during inspection, servicing and condition monitoring of rotating equipment like gearbox, fans, pumps, motors as well as material handling equipment.*

*At the end of the course, candidate will understand about how to judge and analyse condition of the machine based on parameters like vibration analysis and suggest corrective action to the end user. This is aimed to ultimately increase service life of the machine / component.*

**Recommended for:**

Service, maintenance, reliability, testing engineers from O&M divisions.

**Prerequisite:**

A fundamental knowledge of and ability to use analytical skill.

**Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**

plus GST (per participant)

**Max. Participation: 15**

**Course on request****Course contents:**

- Maintenance and service strategies
- Need for condition-based maintenance
- Different machine condition parameters
- Application of visual inspection, thermography, lube oil analysis, ultrasonic, noise, etc.
- Machinery vibration fundamentals
- Analyzing vibration spectra
- Data collection guidelines
- ISO-10816 guidelines for evaluation
- Case studies

# Bearing Reliability in Aggregate and Cement Industries – WE212

## COURSE OBJECTIVE

*Participants will learn about real solutions to real problems related to bearing reliability and maintenance in machinery used in the cement and aggregate industries.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Plant engineers, maintenance / engineering managers, engineers, reliability managers / engineers, maintenance supervisors / team leaders, general maintenance and plant and maintenance planners, mechanical shop managers, mechanical repair services providers, maintenance operations coordinators and technical maintenance trainers.

### **Prerequisite:**

Experienced professionals from cement and aggregate industries.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

**Course on request**

### **Course contents:**

- Aggregate and cement industries overview
- Bearings in aggregate and cement making machineries
- Crushers, conveyors, vibrating screens, kilns, coolers, roller presses
- Bearing installation and maintenance
- Mounting and dismounting of rolling element bearings
- Bearing damage examples

# Bearing Reliability in Paper Industry – WE214

## COURSE OBJECTIVE

*Attendees will learn the skills necessary to successfully install and maintain rolling element bearing in rotating machinery found in paper machine applications.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Service, maintenance, machine repair, roll shop or plant / facility engineering staff of a paper machine. Managers and technicians of paper machines and OEM facilities responsible for rolling bearing performance and reliability. Rotating equipment engineers, reliability engineers, millwrights, mechanics, and maintenance supervisors.

### **Prerequisite:**

Experienced professionals from pulp and paper industry.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

### **Course contents:**

- Rolling element bearing in paper machines
- Mounting and dismounting methods typical to paper machine applications
- Installing and lubricating bearings in paper machines
- Maintaining installed bearings in paper machines
- Troubleshooting common bearing problems
- Introducing condition-based maintenance concepts

# Bearing Reliability in Steel Processing Industry

## COURSE OBJECTIVE

*Attendees will learn the skills necessary to successfully install and maintain rolling element bearings in rotating machinery found in steel processing industry's machine applications.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Service, maintenance, machine repair, roll shop or plant / facility engineering staff of a steel machine. Managers and technicians of paper machines and OEM facilities responsible for rolling bearing performance and reliability. Rotating equipment engineers, reliability engineers and maintenance supervisors.

### **Prerequisite:**

Experienced professionals from steel industry.

### **Course information:**

Duration: 2 days

**Course fee:** INR 15,400/-  
plus GST (per participant)

**Max. Participation: 15**

### **Course on request**

### **Course contents:**

- Steel industry overview
- Rolling element bearing in steel processing machines
- Installing and lubricating bearings in steel industry
- Maintenance of bearings
- Troubleshooting common bearing problems in the process
- Introducing condition-based maintenance concepts

# Bearing Reliability in Food and Beverage Processing Industry

## COURSE OBJECTIVE

*Attendees will learn the skills necessary to successfully install and maintain rolling element bearings in rotating machinery found in food and beverage machine applications.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Service, maintenance, machine repair, roll shop or plant / facility engineering staff of a food and beverage machine. Managers and technicians of paper machines and OEM facilities responsible for rolling bearing performance and reliability. Rotating equipment engineers, reliability engineers and maintenance supervisors.

### **Prerequisite:**

Experienced professionals from food and beverage industry.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

**Course on request**

### **Course contents:**

- Food and beverage industry overview
- Rolling element bearing in food and beverage processing machines
- Installing and lubricating bearings in food and beverage Industry
- Importance of sealing solutions and brief on seals
- Importance of power transmission and brief on power transmission products
- Introducing condition-based maintenance concepts and various condition monitoring techniques in food and beverage

# Proactive Maintenance Techniques – MS210

## COURSE OBJECTIVE

*SKF has developed this course to address industry needs for maintenance personnel to have the knowledge and tools to truly perform proactive and precision maintenance.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Application engineer, condition monitoring engineer / technician, design engineer, maintenance engineer / quality engineer, reliability engineer / TMP engineers.

### **Prerequisite:**

Basic machine maintenance skills and experience.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

**Course on request**

### **Course contents:**

- Overview of proactive maintenance
- Fundamentals of machine condition
- Machinery troubleshooting
- Precision shaft alignment
- Dynamic balancing
- Maximizing bearing life
- Asset life cycle costing
- Introduction to vibration analysis

# World-Class Maintenance – MS200, MS331

## COURSE OBJECTIVE

*To provide reliability engineers with the necessary knowledge and abilities to support the implementation of asset reliability improvement processes in their plant and gain a working knowledge of maintenance strategy review techniques focused upon Reliability Centered Maintenance (RCM).*

### Assessments:

Entry and exit level tests with multiple choice questions.

### Recommended for:

Reliability manager / supervisor, planning manager / planner / TMP engineers / maintenance manager

### Prerequisite:

Basic machine maintenance skills and experience.

### Course information:

Duration: 4 days

**Course fee: INR 31,200/-**  
plus GST (per participant)

**Max. Participation: 15**

### Course on request

### Course contents:

- Maintenance strategies
- AEO and Reliability Centered Maintenance (RCM)
- Condition monitoring
- Balancing and alignment
- Oil analysis
- Root Cause Analysis (RCA)
- Wrench time
- Bench marking-maintenance audit

### Course schedule:

Location	Date
Pune	23, 24, 25 & 26 April 2024

# Reliability Centered Maintenance – MS332

## COURSE OBJECTIVE

*The objective of this training is to provide participants the necessary knowledge of the Maintenance Strategy Review (MSR) and Reliability Centered Maintenance (RCM) methodology.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Reliability manager / supervisor, planning manager / planner / supervisor, maintenance managers.

### **Prerequisite:**

Basic maintenance skills and experience.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

### **Course on request**

### **Course contents:**

- Maintenance strategy
- Know-how to describe the RCM process flow
- Understand the importance of identifying and categorizing assets
- Understand the criticality and the FMECA approach in RCM
- Develop a RCM analysis, as well as know what the implications are of making the strategy work
- Understand the requirements for RCM
- Recognize the importance of data structure
- RCM customization
- Why to conduct a task comparison
- How to implement RCM
- Recognize what a living program is
- Case study and discussion

# Spare Parts Management and Inventory Control – WC230

## COURSE OBJECTIVE

*To provide participants with a sound knowledge and understanding of spares and inventory management in the Maintenance Repair and Operations (MRO) environment. It includes those activities in an organization that ensure the optimal and timely availability of spare parts in order to meet timely maintenance demands.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Engineers, supervisors and managers involved with industrial maintenance inventory control, planning, scheduling purchasing, reliability and maintenance engineering, logistic support, quality, production and warehouse management.

### **Prerequisite:**

Basic knowledge of planning and handling spares.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

**Course on request**

### **Course contents:**

- Spare parts and inventory management processes and principles
- Basic spare part and inventory management terminology
- The importance and relations of spare part and inventory management with respect to business goals
- Identifying, structuring, and classifying spare parts on their criticality, order and re-order parameters, along with other spare parts characteristics
- Applying basic analysis techniques to optimize the availability of spares and cost-effectively handle obsolete spares

# Root Cause Analysis- LP 200

## COURSE OBJECTIVE

### *Course objective*

*Formal Root Cause Analysis (RCA) processes have been adopted by many companies throughout the world with demonstrable benefits. The purpose of this course is to introduce a process for RCA and how we can apply it within condition monitoring work. We will also study some techniques that have been developed to help get to the root cause of*

*issues. It is expected that these tools will be used from time to time by all of the people attending the course.*

*At the end of this course you should:*

- *Be able to execute a RCA study*
- *Be confident in participating as a team member in a complex multi-disciplinary RCA study*
- *Understand and recognize RCA related business opportunities*

### **Recommended for:**

Reliability manager / supervisor,  
planning manager / planner /  
supervisor, maintenance managers

### **Prerequisite:**

A fundamental knowledge of and ability  
to use analytical skill.

### **Course information:**

Duration: 3 days

**Course fee: INR 23,400/-**  
plus GST (per participant)

**Max. Participation: 15**

### **Course on request**

### **Course contents:**

- Introduction:
  - Background
  - What is RCA?
  - Importance of RCA
- RCA Processes: Effective problem solving
- Defining problem
- Cause and effect technique
- Why-why technique
- Why tree
- RCA in practice: Defining objective
- Capturing evidence
- Interviews
- Preparing event sequence
- Brainstorming
- Fishbone diagram
- When to stop

# Supply Chain Management

## COURSE OBJECTIVE

*To provide participants with a sound knowledge and understanding of the supply chain concept to improve an organization's overall supply efficiency. Other concepts included are the definitions of SCM and Logistics, identification procedures, an overview of methods, processes and systems that are used in the operation of supply chains, and the applications of methods, processes, and systems to improve supply chain performance.*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

Middle-level Managers from Marketing, E-commerce, Sales and Operations, Strategic Planning and General Management

### **Prerequisite:**

One year experience in procurement, stores, warehouse and basic knowledge of material flow in the Industry.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

**Course on request**

### **Course contents:**

- Logistics and SCM
- Third party logistics service providers
- Warehousing management
- Warehousing functions
  - Receiving and shipping
  - Put away and storage
  - Order picking
- Inventory management
- Transportation management
- Case studies

# Lean Manufacturing

## COURSE OBJECTIVE

*To provide participants with a sound knowledge and understanding of the terms, terminology, and benefits of lean manufacturing. To conduct value stream maps of the current state, identify the potentials for reduced waste and improve flow, and develop a future state map. Participate in the development of a site-specific lean implementation road map.*

*Need-based training sessions can be conducted in the areas of lean applications and implementation subsequently. One such popular and valuable program is "5S Technique for Workplace Management".*

### **Assessments:**

Entry and exit level tests with multiple choice questions.

### **Recommended for:**

All employees working in a company instituting lean manufacturing

### **Prerequisite:**

Basic knowledge of manufacturing processes and one year of industrial experience.

### **Course information:**

Duration: 2 days

**Course fee: INR 15,400/-**  
plus GST (per participant)

**Max. Participation: 15**

### **Course on request**

### **Course contents:**

1. What is lean?
  - Origin, definition
  - Concept of value
  - Value-added and non-value added activities
  - Lean management philosophy (Game / exercise on lean)
2. What is MUDA, MURA and MURI (Japanese words)
  - MUDA (7 deadly wastes)
  - MURA (Unreasonableness)
  - MURI (Inconsistencies)
  - How does lean overcome them?
3. Wastes (MUDA)
  - Types of wastes
  - Identification of wastes (Exercise)
  - Significance / effect / causes of wastes (Exercise and simulation)
4. Application of wastes (MUDA)
  - Manufacturing
  - Services
  - Software development
5. Lean success stories-  
The above will be an introductory and awareness session. The participants will thoroughly understand the concept of lean and wastes (MUDA). This session will prove to be a head start for exploring the possibility of applying lean techniques organization wide.

# Customized Training Courses

## COURSE OBJECTIVE

*We can design training course as per customer's requirements.*

*We can deliver customized training program at customer's location also at SKF training center.*

### **Assessments-**

Entry Test & Exit Test with Multiple choice questions.

### **Course contents:**

Training course contents will be decided as per customer's needs.

### **Recommended for:**

All the employees such as Service, maintenance, machine repair, Managers, and technicians, Rotating equipment engineers, reliability engineers and maintenance supervisors.

### **Prerequisite:**

Experienced professionals from industry.

### **Course information:**

Course duration and course fee will be decided as per customers training needs.

### **Course fee:**

Per batch (Training Batch size will be limited to 15 participants)

### **Course on request**

**We have released 18 titles and many more releases are planned for the near future.**

Sr. No.	Training Course Name	Duration - Days
1	Bearing maintenance technology	3
2	Vibration analysis Level 1	2
3	Lubrication in rolling element bearing	2
4	Sealing solutions technology	2
5	Vibration Analysis of rotating machinery	3
6	Root cause bearing damage analysis	2
7	Vibration analysis Level 1	2
8	Pump & Motor health management	2
9	Precision shaft alignment	2
10	Mountings and Dismounting's of bearings	2
11	Vibration analysis Level 1	2
12	Lubrication in rolling element bearing	2
13	Vibration analysis Level 2	3
14	Sealing solutions technology	2
15	Proactive maintenance techniques	2
16	Bearing maintenance technology	3
17	Root cause bearing damage analysis	2
18	Vibration Analysis L-2	3

Demo Link: <http://www.self-learningtool.com/sltdemo/demo.html>

## Training Programs Schedule-2024

Sr. No.	Training Course Name	Duration (Days)	Tentative Training Date	Location	Training Cost (INR) Per participants
1	Bearing Maintenance Technology	3	29,30 &31 Jan 2024	Pune	23,400+ GST
2	Vibration analysis level 1	2	27,28 &29 Feb2024	Pune	15,400+ GST
3	Vibration Analysis L-2	3	12,13 & 14 March 2024	Chennai	23,400+ GST
4	Vibration analysis level 2	3	20,21 & 22 March 2024	Pune	23,400+ GST
5	Vibration Analysis L-2	3	10,11 & 12 April 2024	Goa	23,400+ GST
6	World Class Maintenance	4	23,24,25 & 26 April 2024	Pune	31,200+ GST
7	Sealing solutions technology	2	29 & 30 April 2024	Pune	15,400+ GST
8	Vibration Analysis L-2	3	14,15 & 16 May 2024	Ahmedabad	23,400+ GST
9	Pump & Motor health management	2	23 & 24 May 2024	Pune	15,400+ GST
10	Precision shaft alignment	2	13 & 14 Jun 2024	Pune	15,400+ GST
11	Vibration analysis level 1	2	11 & 12 July 2024	Pune	15,400+ GST
12	Vibration analysis level 2	3	28,29 & 30 August 2024	Pune	23,400+ GST
13	Lubrication in rolling element bearing	2	8 & 9 August 2024	Pune	15,400+ GST
14	Sealing solutions technology	2	12 & 13 Sep 2024	Pune	15,400+ GST
15	Precision shaft alignment	2	19&20 Sep 2024	Pune	15,400+ GST
16	Bearing maintenance technology	3	9,10 & 11 Oct 2024	Pune	23,400+ GST
17	Vibration analysis level 1	2	29,30 & 31 Oct 2024	Pune	15,400+ GST
18	Root cause bearing damage analysis	2	7 & 8 Nov 2024	Pune	15,400+ GST
19	Vibration analysis level 2	3	11,12 & 13 Dec 2024	Pune/	23,400+ GST

Based on the specific need, program can further be added. Feel free to communicate your need with no. of participants to [rajendra.gaikwad@skf.com](mailto:rajendra.gaikwad@skf.com)

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You can also get in touch with SKF Authorized Industrial Distributor for more details.

### **SKF Training Solutions**

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### **SKF Training Solutions**

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### **SKF Training Solutions**

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### **SKF Training Solutions**

SKF Solution Factory  
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### **SKF Centre of Excellence**

For Reliability

- Madhav Institute of Technology and Science, Gwalior
- Kalinga Institute of Industrial Technology, Bhubaneswar
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