

ROTARY MART

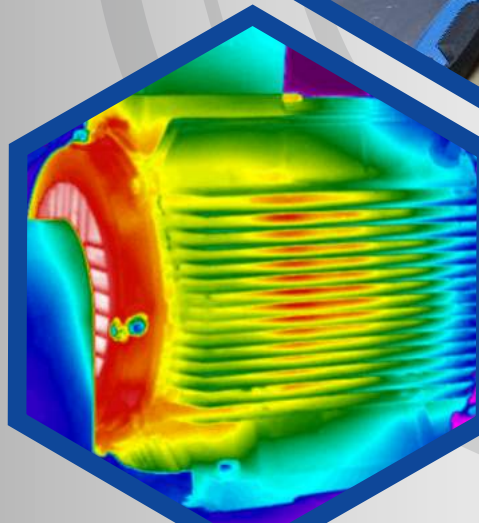
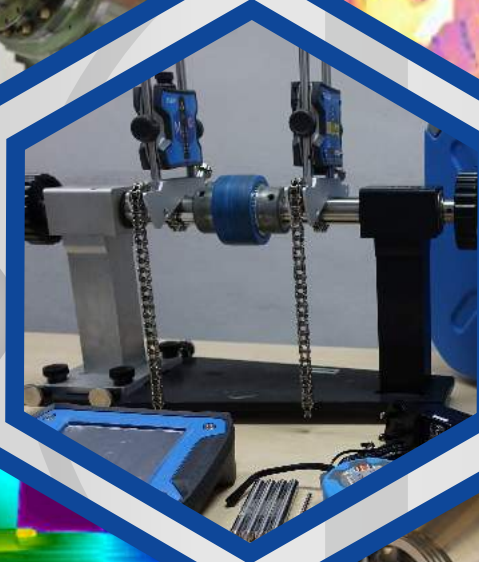
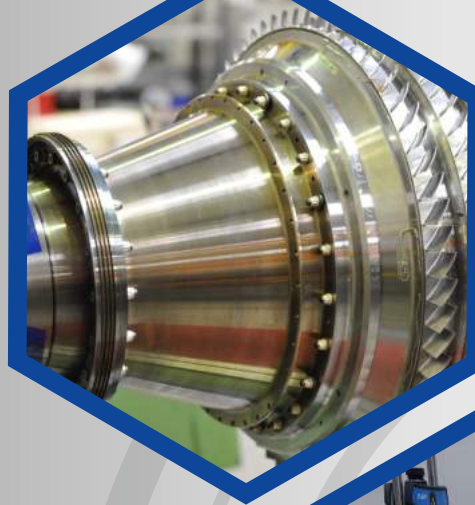
Training Portfolio

Rotary Mart is a leading asset management company specialized for providing condition based maintenance services & trainings for a decade. Our training department has trained numerous industrial sectors with various customized courses.

Our qualified and certified engineers are equipped with state of the art tools and technologies to demonstrate and provide hands on experience to the participants at the plant site or with the aid of test rigs.

Courses

- Vibration Analysis (Beginner)
- Vibration Analysis (Intermediate)
- Vibration Analysis (Advanced)
- Laser Alignment
- Dynamic Balancing
- Thermal Imaging
- Customized Trainings (Client Based)



www.rotarymart.com



W.S 49 Sector 16-B, North Karachi Industrial Area



0333-6963518



services@rotarymart.com

WHO SHOULD ATTEND?

- All Maintenance Professionals
- Predictive Maintenance Technicians
- Reliability Engineers
- Lubrication Engineers
- Craftsmen and Millwrights
- Equipment Operators
- Maintenance Managers
- Operations Managers
- Vibration Instrument Specialists
- Manufacturing and Industrial Engineers
- Maintenance Supervisors
- Laboratory Analysts

INDUSTRIES THAT WILL BENEFIT FROM THESE COURSES

- Power Generation
- Petrochemical
- Pulp and Paper
- Primary Metals
- Process Manufacturing
- Automotive Manufacturing
- Transportation
- Earthmoving
- Municipal Utilities
- Aerospace

IF YOU HAVE ANY OF THE FOLLOWING MACHINES THIS TRAINING IS A MUST:

- Gear Boxes
- Hydraulic Systems
- Motors
- Bearings
- Compressors
- Final Drives
- Diesel Engines
- Paper Machines
- Process Pumps
- Steam Turbines
- Gas Turbines
- Blowers/Fans
- Rolling Mills

Vibration Analysis (Beginner)

What is vibration?

Causes of vibration

- Looseness
- Unbalance
- Misalignment

Monitoring Machine Vibration

Severity of Machine Vibration (units & calculation)

Vibration Graphs

Analysis of Graphs

Methods of Data Collection

Case Studies



What Are The Benefits To You?

Vibration analysis helps you and your organization to attain optimum performance from physical assets to maximize the returns on your investments and minimize incidents.

This course also helps you to understand predictive maintenance techniques and its implementations to reduce the inventory of spares and uneven breakdowns.

Other Courses

- Vibration Analysis (Intermediate)
- Vibration Analysis (Advanced)
- Laser Alignment
- Dynamic Balancing
- Industrial Safety



Course: Vibration Analysis (Beginner)

Duration: 5 Hours

Demonstration: Onsite

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WHO SHOULD ATTEND?

- All Mechanical Maintenance Professionals
- All Electrical Maintenance Professionals
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- Reliability Engineers
- Lubrication Engineers
- Equipment Operators
- Maintenance Managers
- Manufacturing and Industrial Engineers
- Maintenance Supervisors
- Inspection Engineer

INDUSTRIES THAT WILL BENEFIT FROM THESE COURSES

- Power Generation
- Petrochemical
- Pulp and Paper
- Primary Metals
- Process Manufacturing
- Automotive Manufacturing
- Aerospace
- Pharmaceutical
- Textile Engineers
- Refineries
- Fertilizers

IF YOU HAVE ANY OF THE FOLLOWING MACHINES THIS TRAINING IS A MUST:

- Gear Boxes
- Hydraulic Systems
- Motors
- Bearings
- Lubrication
- Paper Machines
- Process Pumps
- Steam Turbines
- Gas Turbines
- Blowers/Fans
- Rolling Mills

Vibration Analysis (Intermediate)

Principles Of Vibration

Understanding signals

Data Acquisition

Signal Processing

Setting Alarm Limit

Analysis Process

Machine Diagnosis
• unbalance • misalignment • resonance

Acceptance Testing



What Are The Benefits To You?

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This course also helps you to understand predictive maintenance techniques and its implementations to reduce the inventory of spares and uneven breakdowns.

Other Courses

- Vibration Analysis (Beginner)
- Vibration Analysis (Advanced)
- Laser Alignment
- Dynamic Balancing
- Industrial Safety



Course: Vibration Analysis (Intermediate)

Duration: 5 Hours

Demonstration: Onsite

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IF YOU HAVE ANY OF THE FOLLOWING MACHINES THIS TRAINING IS A MUST:

- Gear Boxes
- Hydraulic Systems
- Motors
- Bearings
- Lubrication
- Paper Machines
- Process Pumps
- Steam Turbines
- Gas Turbines
- Blowers/Fans
- Rolling Mills

Vibration Analysis (Advanced)

Principles Of Vibration

Data Acquisition

- Different Transducers
- Vibration Units
- Phase Analysis

Signal Processing

- Sampling & Aliasing
- Dynamic Range
- Windowing
- Averaging

Setting Alarm Limit

- Baseline Setting
- Band Alarms
- Envelope Alarms

Analysis Process

- Spectral Comparisons
- Trending

Bearings, Electric motor & gearbox analysis

Machine Diagnosis

- Unbalance
- Misalignment
- Resonance

Spectrum Analysis Orbits Time Waveform Analysis

Acceptance Testing



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Other Courses

- Vibration Analysis (Beginner)
- Vibration Analysis (Intermediate)
- Laser Alignment
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Course: Vibration Analysis (Advanced)

Duration: 5 Hours

Demonstration: Onsite

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INDUSTRIES THAT WILL BENEFIT FROM THESE COURSES

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- Aerospace
- Pharmaceutical
- Textile Engineers
- Refineries
- Fertilizers

IF YOU HAVE ANY OF THE FOLLOWING MACHINES THIS TRAINING IS A MUST:

- Centrifuges
- Shredders
- Cutters
- Shredders
- Induced Draft Fans
- Force Draft Fans
- Primary Air Fans
- Cooler Fans
- Ventilation Fans

Dynamic Balancing

Introduction

Diagnosing Unbalance

- Static
- Couple
- Dynamic

Causes of Unbalance

Onsite Balancing

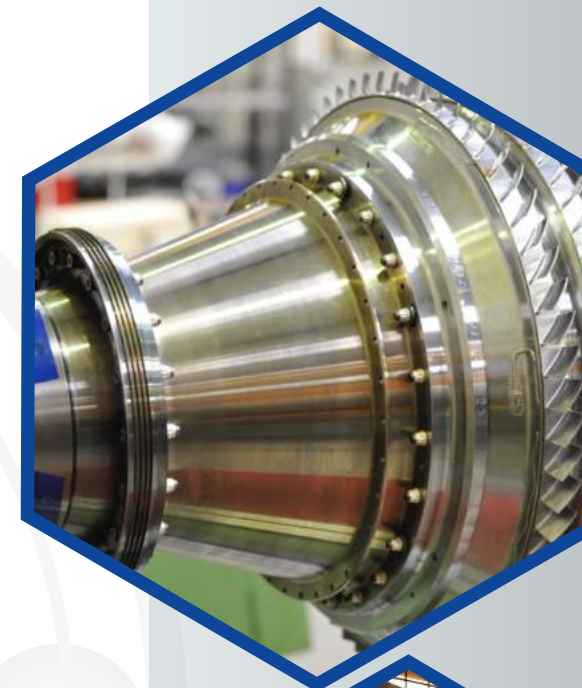
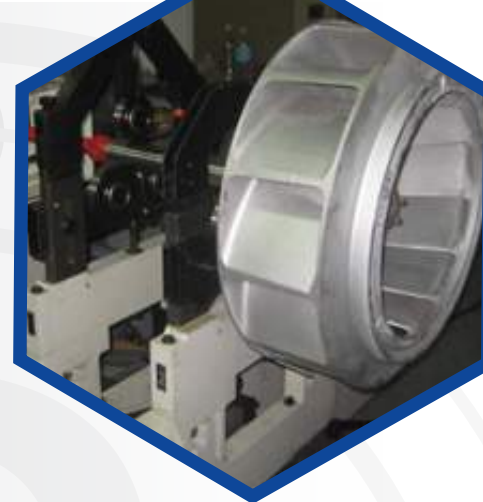
- Single plane
- Two plane balancing

Vector and Polar Plot

ISO Standards

- Residual unbalance

Case studies



What Are The Benefits To You?

Dynamic balancing of the machine plays an important role in reducing machine vibration and increase machine life. It plays a very important Role in reducing bearing consumption. The team of our well-trained Engineers and technicians is ready to provide solution to your dynamic balancing problems. We do Single-Plane and Double-Plane balancing of machine rotors including I.D Fans, F.D Fans, High Speed Crushing & Cutting Machine and Centrifugal Machines in Fertilizer, Cement and Sugar Industry etc.

Other Courses

- Vibration Analysis (Beginner)
- Vibration Analysis (Intermediate)
- Vibration Analysis (Advanced)
- Laser Alignment
- Industrial Safety



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Course: Dynamic Balancing
Duration: 5 Hours
Demonstration: Onsite



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INDUSTRIES THAT WILL BENEFIT FROM THESE COURSES

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- Primary Metals
- Process Manufacturing
- Automotive Manufacturing
- Aerospace
- Pharmaceutical
- Textile Engineers
- Refineries
- Fertilizers

IF YOU HAVE ANY OF THE FOLLOWING MACHINES THIS TRAINING IS A MUST:

- Gear Boxes
- Coupled Drives
- Process Pumps
- Steam Turbines
- Gas Turbines
- Compressors
- Blowers/Fans

Laser Alignment

Introduction

- Why alignment is so important

Detecting Misalignment

- Offset
- Angular
- Skew

Causes of Misalignment

Tolerances and speed

- Dynamic Movement

Pre Alignment Tasks

Alignment Methods

- Straight Edge
- Dial Indicator
- Laser Heads

Belt Tension & Alignment

Moving The Machine



What Are The Benefits To You?

Laser Alignment helps you to learn the most advanced proactive maintenance technique which leads an individual to achieve the most precise alignment between different rotary equipment within few minutes providing a safer working environment to industry and longer equipment and its component life.

Other Courses

- Vibration Analysis (Beginner)
- Vibration Analysis (Intermediate)
- Vibration Analysis (Advanced)
- Thermal Imaging
- Dynamic Balancing
- Industrial Safety

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Course: Laser Alignment
Duration: 5 Hours
Demonstration: Onsite



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- All Electrical Maintenance Professionals
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- Reliability Engineers
- Lubrication Engineers
- Equipment Operators
- Maintenance Managers
- Manufacturing and Industrial Engineers
- Maintenance Supervisors
- Inspection Engineers
- Electrical Auditor

INDUSTRIES THAT WILL BENEFIT FROM THESE COURSES

- Power Generation
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- Pulp and Paper
- Primary Metals
- Process Manufacturing
- Automotive Manufacturing
- Aerospace
- Pharmaceutical
- Textile Engineers
- Refineries
- Fertilizers

IF YOU HAVE ANY OF THE FOLLOWING MACHINES THIS TRAINING IS A MUST:

- Gear Boxes
- Hydraulic Systems
- Motors
- Bearings
- Lubrication
- Paper Machines
- Process Pumps
- Steam Turbines
- Gas Turbines
- Blowers/Fans
- Rolling Mills
- Refractory kilns and Furnaces

Infrared Thermography

> Introduction

> Photograph Vs Thermograph

> IR Camera Working Principle

> Emission and Reflection

> Data Capturing

> Data Analysis (Thermal Imaging)

> Guidelines for Good Practice

> Where To Use / Applications

What Are The Benefits To You?

Thermal imaging gives you the power to see problems in a way no other technology can, and allow you to inspect equipment quickly and take accurate temperature measurements from a safe distance. Thermal cameras help you find impending trouble before it hurts someone, shuts things down or wastes energy.

Applications:

Electric Motors
Electric Panels
Mechanical Equipments
Thermal Analysis of Bearings and lubrication
Refractory equipments
Thermal Analysis of Boilers, steam traps etc

Other Courses

- Vibration Analysis (Beginner)
- Vibration Analysis (Intermediate)
- Vibration Analysis (Advanced)
- Laser Alignment
- Dynamic Balancing
- Industrial Safety

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Course: Thermal Imaging
Duration: 4 Hours
Demonstration: Onsite