# TRAINING ON VIBRATION ANALYSIS & IN-SITU DYNAMIC BALANCING - 2 DAYS WORKSHOP ON ALIGNMENT - 1 DAY THEORY & PRACTICE

**CONDUCTED BY** 

**VIBROTECH TRAINERS & CONSULTANTS PVT. LTD** 





### PROGRAMME OVERVIEW:

LOCATION: CHENNAI

**OPTIONAL: (AT CUSTOMER PLANT – MINIMUM 08)** 

"Basics of Vibration Analysis, Diagnostic Studies & In-situ Dynamic Balancing - 2 Days"

"Workshop on Coupling Alignment - 1 Day"

Its a competency-based program where the candidate will be taught from the basics of vibration up-to advance level in vibration. The candidate will also be taught on the practical procedure of Balancing.

## **TOPICS COVERED**

# (DAY 1)

## ✓ Basics of Vibration

- Define Vibration Analysis Terms Displacement,
   Velocity, Acceleration, Frequency, Phase & Spectrum
- Select appropriate vibration meter/analyzer for a particular task
- Identify and locate the vibration pickup precisely with respect to position and orientation for achieving best results
- Measure and record data using vibration analyzer
- Understanding Frequency & Phase Analysis
- Phase and spectral symptoms of Unbalance, Bent Shaft, Looseness & Coupling Misalignment
- Vibration due to coupling and shaft misalignment
- Factors that affect natural frequency

# ✓ Vibration Transducers & its Selection Methods

- Introduction
- Types of Vibration Transducers and Their Optimum Applications
- Selection Criteria
- Mounting of Transducer & its Application

## ✓ ISO Standards

- Classification of Machine.
- Fixing up of alarm & limits.
- Criteria to be considered for test bed and on-site test.

- Analyzing electrical problem.
- Beat, resonance and elimination of such problems

## ✓ Balancing

- Single Plane Balancing Theory & Practice
- Prevention and correction of unbalance
- Single plane vs. Two plane unbalance
- Spectral analysis for unbalance
- Preventing unbalance due to assembly errors
- Working with vendors to improve balancing standards.

# (DAY 3)

## ✓ Alignment - Training & Practice

- About Couplings & Types of Couplings
- Basics of Alignment & Effects of Misalignment
- Deducting Soft Foot & solving
- Types, Causes for Misalignment
- Advantages of Good Alignment
- Alignment methods including RAP Method
- Pre-conditions of Alignment & Alignment Tolerance
- Laser Alignment Practice

# ✓ Real Life Case Study

# (DAY 2)

# ✓ Vibration Analysis

- Approach to Vibration Analysis.
- What to look for most of the time
- Approaching a problem
- Analysis of defects in Bearings, Belt, Gearbox, Coupling.

## WHO SHOULD ATTEND?

Manager/Engineer/Supervisor/Staff who are involved in direct maintenance, trouble shooting of rotating machinery and those involved in best maintenance practices & continuous improvement.

Maximum Number of Participants - 10

**VIBROTECH CERTIFICATES WILL BE AWARDED TO ATTENDEES** 

# M/s. VIBROTECH TRAINERS & CONSULTANTS PVT LTD.

(INTERNATIONAL REPRESENTATIVE OF M/s. VIBRATION INSTITUTE, USA)

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## **COURSE FEES\* INCLUSIVE OF ALL TAXES (18% GST):**

Option 1 - Vibration Analysis & In-Situ Dynamic Balancing (02 Days) & Alignment Workshop (01 Day) - 03 Days Rs. 28,320/- (RUPEES TWENTY EIGHT THOUSAND THREE HUNDRED & TWENTYONLY) - PER CANDIDATE

Option 2 - Vibration Analysis & In-Situ Dynamic Balancing - 02 Days

Rs. 17,700/- (RUPEES SEVENTEEN THOUSAND & SEVEN HUNDRED ONLY) - PER CANDIDATE

Option 3 - Alignment Workshop - 01 Day

Rs. 12,750/- (RUPEES TWELVE THOUSAND SEVEN HUNDRED & FIFTY ONLY) - PER CANDIDATE

### This above Fees is inclusive of:

- Course Material / Course Book
- Expenses towards Breakfast, Tea, Lunch and Afternoon Snacks during Course.

### **Terms and Conditions**

- Payment terms: 100% Advance payment at least 05 Days in advance.
- GST of 18% or as applicable at the time of invoicing is payable by you.
- Our Bank details are as follows:

Account Name: VIBROTECH TRAINERS AND CONSULTANTS PVT LTD

Bank Name: State Bank of India Branch: Thiruvanmiyur Branch, Chennai Tamil Nadu

Bank Account No. 64000350924 IFSC / RTGS / NEFT Code: SBIN0001985

- Fees can also be paid through Demand Draft, drawn on any nationalized Bank in favour of "VIBROTECH TRAINERS AND CONSULTANTS PVT LTD", payable at Chennai.
- Last date of receiving filled in application form with full payment not later than 05 days prior to training.
- For AC Lodging additional fee of Rs. 1500/- per day shall be applicable.
- \* Prices subject to vary without notice. Kindly confirm before applying.

## **Course Benefits:**

- Exposure to better Vibration Analysis.
- Exposure to Practical Dynamic Balancing.
- Deeper Understanding of Vibration Principles & Techniques
- Alignment concepts & Methodology
- Latest Trends in Alignment

## **Requisites:**

In-plant experience in Mechanical and/or Electrical Maintenance, Troubleshooting. Freshers can also participate.

## The Industries / Sectors Targeted

Cement, Sugar, Nuclear, Power, Petrochemicals, Fertilizers, Refineries, Iron & Steel, Chemicals, Oil rigs, Production Platforms, Automobile including NC & CNC Machines, Processing Plant, etc.

### **Machineries**

All types of industrial machines like Large Fans, Blowers, Motors, Pumps, Mixers, Agitators, Mills, Crushers, Fibrizers, Centrifuges, Turbines-Generators, DG Sets, Compressors, Press, CNC Machines, Machining Centers, etc.

## **Course Trainers / Facilitators:**

Mr. V. Vijayakrishnan, Director, M/s. Vibrotech Trainers & Consultants Pvt. Ltd., Chennai, Tamil Nadu, India, is an ISO Certified CATEGORY III Vibration Analyst, Proctor, Trainer and **only Asian among Panel of International Consultant for Vibration Institute, USA** will conduct Vibration Analysis Training. He has more than 35 years of good practical hands-on experience in industries like (Automobile, Cement, Sugar, Power (Thermal / Nuclear), Petrochemical, Refinery, Oil & Natural Gas, Pharmaceuticals, Paper, Chemical, etc.,) in India & Abroad.

Faculty for Alignment having more than 37 years of hands-on experience and Mr. Senthil Kumar having more than 12 years of alignment experience will be conducting practical demonstration using Laser Alignment instrument.

Refund is not accepted. However, change of nomination shall be considered.

VIBROTECH TRAINERS & CONSULTANTS PVT. LTD., CHENNAI RESERVES THE RIGHT TO ACCEPT OR REJECT NOMINATION OF CANDIDATES FOR TRAINING.

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