

ALIGNMENT TRAINING PROGRAM WITH LASER ALIGNMENT TECHNIQUES

CONDUCTED BY: VIBROTECH TRAINERS & CONSULTANTS PVT. LTD.

ON 07.10.2020 FROM 10.00 AM TO 05.00PM

PROGRAMME OVERVIEW :

In present industrial environment, availability and reliability of equipment is considered to be important. In order to achieve the same knowledge about various condition monitoring techniques, overhauling procedures and Alignment work needs to be imparted among the maintenance officials. This training program devised to develop the knowledge on carrying out Alignment as per good engineering practices and Latest techniques used in Alignment (Laser Alignment).

Alignment - Training Topics

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• About Coupling & Types of Couplings• Basics of Alignment• Effects of Misalignment• Deducting Soft Foot & Solving• Types and Causes of Misalignment | <ul style="list-style-type: none">• Advantages of Good Alignment• Alignment methods – in detail including Reverse Alignment Method• Pre-conditions of Alignment & Alignment Tolerance• Practical Demonstration on Alignment with Laser Alignment tool. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Trainer Profile:

Name: Mr. V. Deenadayalan

Years of Experience: 37 years

Last Employment: Deputy Plant Manager at Cauvery Power Generation Chennai Pvt Ltd, Gummidipoondi.

Previous Employment: Saudi Arabia, Oman, Qatar, Abhudhabi
Worked as Senior Manager – O & M in M/s. Hofincons InfoTech & Industrial Services Pvt. Ltd.

He has hands on experience in Blowers, High Speed Compressors, Chillers, Agitators, Ball Mills, Cranes, DG Sets, Boilers, Pumps, Hydraulic Systems, Stackers & Reclaimers, and Conveyors.



Charges towards One Day Training Program on Alignment : Rs. 9,500/-
Concepts with Laser Alignment Techniques

Course Benefits:

- To gain knowledge on various types of coupling and their area of usage.
- To enrich knowledge on different Alignment Techniques.
- To get details about the Calculation to be done while carrying out Alignment.
- To get updated in Latest Technology/Techniques followed in Alignment (Laser Alignment).

Who should attend?

Maintenance Manager/Engineer/Staff who involve in direct maintenance, trouble shooting of rotating machinery and those who want to enhance their knowledge in best maintenance program and continuous improvement.

Bank Details

Name of Bank: HDFC Bank

Account No.: 50200049396784

IFSC/NEFT/RTGS Code: HDFC0000010

Branch: BESANT NAGAR, CHENNAI, INDIA.

Requirements:

Computer with good internet Connection, Microphone, Headset & Webcam & Zoom account.

Deliverables:

Scanned Soft copy of Course Material along with Training Participation Certificate.

Online session through **ZOOM Meeting App**

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

M/s. VIBROTECH TRAINERS & CONSULTANTS PVT LTD.

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

B2B, BBCL Sukhin, H -29 & 30, South Avenue, Kamaraj Nagar, Thiruvanimiyur Chennai-600 041, Tamil Nadu, INDIA.

Phone: +91-44-24486363/ 24486364, Fax: +91-44-24486364 Mobile: +91 9444043414

Email: vibrotech@gmail.com, vibrotechchennai@yahoo.com

Website: www.vibrotech.co.in

02 DAYS ONLINE SHORT-TERM TRAINING ON BASIC VIBRATION ANALYSIS

CONDUCTED BY: VIBROTECH TRAINERS & CONSULTANTS PVT. LTD.

DATE: 08th & 09th Oct'2020

TIMING: 10.00 AM to 05.00 PM IST

Synopsis:

In present Industrial environment, the necessity of equipment availability and reduction of unpredicted failure is of utmost important. Many techniques are being carried out to improve the reliability and availability of equipments. One such scientifically proved technique which have gained momentum and widely practiced throughout the world is Vibration Analysis and Diagnostic Studies. It is an important tool not only for assessing equipments but also in diagnosing and identifying the cause of defect and inaccuracies in case vibration levels are high.

Training Topics

Basics on Condition Based Maintenance

- Define Predictive maintenance
- Bath Tub Diagram
- Trending
- Various CBM techniques

Vibration Analysis

- What is Vibration and how can it be used to Evaluate Machinery Condition
- Define Vibration Analysis Terms – Displacement, Velocity, Acceleration, Frequency
- What is Vibration Phase?
- What is the Vibration spectrum?
- Difference between RMS, Peak and Peak-Peak Vibration Amplitude?
- When to use Displacement, Velocity or Acceleration?
- How much is too much Vibration?
- What is overall Vibration?
- Understanding Phase and Its Application?
- Using Phase Analysis in Vibration Diagnostics?
- Common pitfalls in every day Vibration Measurements
- Choosing Measurements Location

Introduction to Vibration Signature Analysis and How to Diagnose Machine Operating Condition

- Mental Approach to Vibration Analysis
- Approaching a machinery vibration problem
- Mass Unbalance
- Eccentric Rotors, Bent Shaft
- Misalignment, Mechanical Looseness

- Rolling Element Bearings Failure & Journal Bearings Failure
- Understanding, Preventing, and Correcting **Gear Vibrations**
- Machinery Soft Foot and Foot-Related
- **Differentiate Electrical Defects from Mechanical Defects** Bent Shaft, Looseness (Including Bearings) and Belt Vibrations
- **Resonance** - Static tests and running machine tests
- Hydraulic and Aerodynamic Forces Problem
- Rubbing

Overview of Vibration Transducer and How to Properly Select Them

- Types of Vibration Transducers and Their Optimum Applications
- Accelerometers, Velocity Pickups, Noncontact Eddy Current Displacement Probes
- Shaft Contact Displacement Probes
- Shaft Sticks, Shaft Riders
- Selection Criteria
- Mounting of Transducer, & Mounting Application

Single Plane Balancing – Theory

- Prevention and correction of unbalance
- Single plane vs. two plane unbalance
- Spectral analysis for unbalance
- Preventing unbalance due to assembly errors

ISO Standards classification of machinery in Good, Fair and Rough

- How to fix limits for equipment
- Criteria considered for Test Bed & On Site Test
- Proven Method for Specifying Spectral Band Levels and Frequencies Using Predictive Maintenance Software System

Course Outcome

- To understand the Basics and Fundamental of Vibration.
- **To gain knowledge in identifying the Root Case of Problem in Machinery.**
- To Know about Latest Technologies used in Condition Monitoring.
- **To perform Vibration Analysis (Spectrum Analysis) and know more on Phase Analysis & Balancing.**

02 DAYS ONLINE SHORT-TERM TRAINING ON BASIC VIBRATION ANALYSIS

CONDUCTED BY: VIBROTECH TRAINERS & CONSULTANTS PVT. LTD.

DATE: 08th & 09th Oct'2020

TIMING: 10.00 AM to 05.00 PM IST

Speaker's Profile:

V. Vijayakrishnan, Director - M/s. Vibrotech Trainers & Consultants Pvt Ltd.

EXPERIENCE: 35 YEARS

- International Vibration Consultant
- Certified Vibration Analyst, CAT-III – Vibration Institute, USA
- Certified Maintenance & Reliability Professional (CMRP) – SMRP, USA



MAJOR CREDENTIALS:

- Visited more than **300 industries in India & Abroad** to solve Critical Vibration problems for all types of machineries from CNC machines to High Speed Turbines and Power Turbines including its Balancing.
- Have carried out more than **500 In-site Balancing and analysed more than 900-1000** rotating machineries including reciprocating machines.
- Have conducted more than 200 Training Programs in Vibration Analysis in India & Abroad.
- Have trained and proctored **ISO 18436-2 CAT I, II & III Vibration Analyst Certification** to more than 150 working individuals all over the world.

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.

PRE-REQUISITES

- Good internet connection.
- Good quality headphone/speaker set with Laptop / Desktop.
- You should have notepad/pen to note down important points.
- Zoom Account.

Online session through **ZOOM Meeting App**

**Fees for 2-Days Short Term Course on Basic Vibration Analysis:
Rs 12,000/- Per Candidate**

Bank Details:

Banker Name: **HDFC BANK**

Bank Account No: **50200049396784**

IFSC / NEFT / RTGS CODE: **HDFC0000010** Branch: **BESANT NAGAR, CHENNAI, INDIA.**

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

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

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

**B2B, BBCL Sukhin, H -29 & 30, South Avenue, Kamaraj Nagar, Thiruvanmiyur,
Chennai-600 041, Tamil Nadu, INDIA.**

Phone: +91-44-24486363/ 24486364, Fax: +91-44-24486364 Mobile: +91 9444043414

Email: vibrotech@gmail.com, vibrotechchennai@yahoo.com

Website: www.vibrotech.co.in