

**ONLINE TRAINING FOR FRESHERS ON BASIC INDUSTRIAL REQUIREMENTS, ALIGNMENT  
TECHNIQUE - INCLUDING LASER ALIGNMENT, VIBRATION ANALYSIS – 05 DAYS**

**CONDUCTED BY**

**VIBROTECH TRAINERS & CONSULTANTS PVT. LTD.**



Interested Candidates shall reach us from the below details.  
 Email: vibrotech@gmail.com / info@vibrotechchennai.com  
 Whatsapp: +91- 9789937443 / 9444296560 / 9444043414  
 Website: vibrotech.co.in

**PROGRAMME OVERVIEW:**

This program is developed with a mission to enhance the knowledge of a graduate in an industry by practically training them on Basic Industrial Requirements, Fundamentals of Basic Maintenance Activities, Tools used for Maintenance Activities, Alignment Concepts along with advanced Laser Alignment Techniques, Vibration Analysis, Diagnostic Studies and In-Site Dynamic Balancing of Rotors.

**(08 Hours/Day – Total 40 Hours) COURSE CONTENTS (05<sup>th</sup> October to 09<sup>th</sup> October'2020)**

| <b>Tools &amp; Tackles – 08 Hrs.<br/>Day 01 (05<sup>th</sup> October'2020)</b>  | <b>Precision Instruments – 08 Hrs.<br/>Day 02 (06<sup>th</sup> October'2020)</b>  | <b>Alignment – 08 Hrs.<br/>Day 03 (07<sup>th</sup> October'2020)</b>   |
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| <p><b>Types &amp; Applications of</b></p> <ul style="list-style-type: none"> <li>Spanners, Allen key</li> <li>Screw Driver, Hammers</li> <li>Pliers, Wrench</li> <li>Vice clamp, Chisel</li> <li>Saw, Files</li> <li>Scale &amp; calipers</li> <li>Marking Tools</li> <li>Leveling Instrument (Spirit &amp; Master Level)</li> <li>Gauges like Feeler Gauge, Angle Gauge, Screw Pitch Gauge, Wire Gauge, Drill point Gauge, Bevel Gauge, Length Gauge, Plug Bore Gauge, Drill Center Gauge, Slip Gauge</li> <li>Grinding Machine</li> <li>Drilling Machine</li> </ul> | <p><b>Precision Instruments</b></p> <ul style="list-style-type: none"> <li>Dial Gauge Indicator</li> <li>Micrometer and its types - Inside Micrometer, Outside micrometer, Depth Micrometer, Screw thread Micrometer, Inside and outside Tubular Micrometer, Electronic Micrometer</li> <li>Vernier caliper, Dial Vernier Caliper</li> <li>Depth Gauge</li> <li>Vernier Height Gauge</li> <li>Vernier Depth Gauge</li> <li>Vernier Bevel protractor</li> <li>Combination set</li> <li>Thickness Gauge</li> <li>Drilling &amp; various types of Drill bits</li> <li>Tap, Dies, Reamer, Thread Extractor</li> <li>Scrapers &amp; its types</li> </ul> | <p><b>Alignment Concepts</b></p> <ul style="list-style-type: none"> <li>About Couplings &amp; Types of Couplings</li> <li>Basics of Alignment &amp; Effects of Misalignment</li> <li>Deducting Soft Foot &amp; solving</li> <li>Types, Causes for Misalignment</li> <li>Advantages of Good Alignment</li> <li>Alignment methods – in detail including Reverse Alignment Method</li> <li>Pre-conditions of Alignment &amp; Alignment Tolerance</li> <li><b>Practical Demonstration on Alignment with Laser Alignment tool.</b></li> </ul> |

**Vibration Analysis & Balancing – 16 Hrs. Day 04 & 05 (08<sup>th</sup> & 09<sup>th</sup> October'2020)**

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| <p><b>Basics of Vibration</b></p> <ul style="list-style-type: none"> <li>Define – Displacement, Velocity, Acceleration, Frequency, Phase &amp; Spectrum</li> <li>Measure and record data using vibration analyzer</li> <li>Understanding Frequency &amp; Phase Analysis of Unbalance, Bent Shaft, Looseness, Area contact, Misalignment, Belt, Coupling, etc.</li> <li>Vibration due to coupling and shaft misalignment</li> <li>Factors that affect natural frequency</li> <li><b>Vibration Transducers &amp; its Selection Methods</b></li> <li><b>ISO Standards</b></li> </ul> | <p><b>Vibration Analysis</b></p> <ul style="list-style-type: none"> <li>Approach to Vibration Analysis.</li> <li>Understanding Frequency analysis of defective Bearings, Gearbox, Flow Turbulences, Cavitation, Beat, resonance.</li> <li>Analyzing Electrical defects on Stator, Rotor, Rotor bars, Magnetic Centre, SCR, etc.</li> </ul> <p><b>Balancing</b></p> <ul style="list-style-type: none"> <li>Single Plane Balancing</li> <li>Prevention and correction of unbalance</li> <li>Single plane vs. Two plane unbalance</li> <li>Spectral analysis for unbalance</li> <li>Preventing unbalance due to assembly errors.</li> </ul> |
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**COURSE FEES:**

The course fees for Complete Training is Rs. 27,000/- only per candidate.

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| Course Fees for Vibration Analysis: Rs.12,000/- per candidate   | Course Fees for Tools & Tackles – Rs. 3,750/- per candidate |
| Course Fees for Precision Instrument: Rs. 4,500/- per candidate | Course Fees for Alignment Rs. 9,500/- per candidate         |

**Other Payment Terms:**

- **Payment terms: Advance Payment to be made on or before 03.10.2020**
- **Our Bank details are as follows:**

Banker Name: **HDFC BANK** 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:**

Soft copy of Training Participation Certificate.

Online session through **ZOOM Meeting App**

**COURSE OUTCOME**

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| <ul style="list-style-type: none"><li>• To Gain Knowledge on the various types Tools used in industry and their Operating Principle, purpose.</li><li>• To gain knowledge about Machine Elements used in the Equipments in Industries.</li><li>• To gain knowledge about various Process, Machineries used in the different industries like Cement, Power, Sugar, Pharmaceutical, Paper etc.</li><li>• To have knowledge about various problems occurring in Machineries and their Diagnosis</li><li>• To update the latest technologies used in Maintenance Field.</li></ul> | <ul style="list-style-type: none"><li>• To understand Vibration from Basics to Advanced level (Diagnosis of problem using spectrum)</li><li>• To identify the Problem of equipment using Vibration Analysis.</li><li>• To gain knowledge in the Coupling, different alignment techniques and latest trend in Alignment (Practical experience in Laser alignment)</li><li>• To gain practical experience in Dynamic Balancing of Machineries.</li><li>• To get experienced in Thermal image capturing to Problem Identification.</li></ul> |
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**Trainer's Profile**

**Mr. V. Vijaykrishnan**, Director, M/s. Vibrotech Trainers & Consultants Pvt. Ltd., Chennai, Tamil Nadu, India, is an **ISO Certified CATEGORY III Vibration Analyst, Proctor, Trainer and an International Vibration Consultant** accredited by **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. 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.

**Mr. V. Deenadayalan – Training Head** having more than 37 years of experience shall be conducting training in Tools & Tackles, Precision Instruments & Alignment & **Mr. Senthil Kumar – Sr. Manager Alignment Services** having 15 years of experience will be conducting practical demonstration using Wireless Laser Alignment Instrument.

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

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

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

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