

MAINTENANCE ANALYTICS & TRAINING SERVICES

VIBRATION ANALYSIS & IN-SITU DYNAMIC BALANCING – 02 DAYS

COUPLING ALIGNMENT – 01 DAY (THEORY AND PRACTICE)

COURSE CONTENTS

Basics of Vibration

- Terminologies of Vibration Analysis – Displacement, Velocity, Acceleration, Frequency, Phase & Spectrums.
- Selection of instrument for task
- Identification of locating the vibration pickups based on orientation for achieving best results.
- Measurement & recording of data using vibration analyzer.
- Basics of Frequency & Phase Analysis
- Identifying Unbalance, Bent Shaft, Looseness & Coupling Misalignment.
- Importance / symptoms of natural frequency

Vibration Transducers & its Selection Procedures

- About the transducers
- Types of Vibration Transducers and their applications
- Criteria of Selecting appropriate transducers
- Mounting of Transducer & its usage

ISO Standards

- Classification of Machine.
- Fixing up of alarm & limits.

Criteria to be considered for test bed and on-site test.

Vibration Analysis

- Basics towards Vibration Analysis.
- What to look Physically for during vibration measurement
- Sequence of steps towards analyzing a problem
- Analysis of Various defects in Bearings, Belt, Gearbox, Coupling, etc.

Balancing

- Single Plane Balancing – Theory & Demonstration
- Correction of unbalance & steps towards prevention.
- Weight Splitting / Combination using vectors
- Single plane vs. Two plane Balancing
- Identifications of unbalance through spectrum analysis
- Prevention of unbalance due to assembling errors
- Working with manufacturers / vendors to improve Balancing standards.

Alignment - Training & Practice (01 Day)

- About Couplings & its types.
- Basics of Alignment & Effects of Misalignment
- Identification of Soft Foot & solving it.
- Types & Causes for Misalignment
- Advantages of improvement Alignments
- Alignment Graphical Calculations using **Rim & Face & Reverse Dial Gauge Method**
- Pre-conditions of Alignment & **Alignment Tolerance**
- Laser Alignment – Practice

Course Trainers / Facilitators:

Faculty for Vibration Analysis Training 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 38 years of hands-on experience will be conducting practical demonstration using Laser Alignment instrument.

“MAINTENANCE ANALYTICS TRAINING SERVICES, CHENNAI RESERVES THE RIGHT TO ACCEPT OR REJECT NOMINATION OF CANDIDATES FOR TRAINING.”

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