

# MAINTENANCE ANALYTICS & TRAINING SERVICES

## REFRESHER ISO 18436-2 CAT-II TRAINING

### COURSE CONTENTS

#### Basics on Machinery Vibration

- The Physical Nature of Vibration
- Vibratory Motion
- Measures
- Vibration Measurement
- Phase Measurement
- Vibration Analysis
- Excitation
- Natural Frequencies, Mode Shapes, and Critical Speeds

#### Data Acquisition

- Selecting a Measure
- Vibration Transducers
- Triggering Devices
- Transducer Selection
- Transducer Mounting
- Transducer Location
- Frequency Spans
- Data Display

#### Data Processing

- Oscilloscopes
- FFT Analyser
- Electronic Data Collector
- Data Sampling
- Aliasing
- Windowing
- Dynamic Range
- Averaging
- Setup of FFT Analyser and Data Collector

#### Fault Diagnosis

- Fault Diagnosis Techniques
- Operating speed Faults
- Rolling Element Bearings
- Gearboxes
- Electric Motors
- Centrifugal and Axial Machines
- Pumps
- Fans
- Compressors

#### Machine Condition Evaluation

- Shaft Vibration
- Bearing Vibration
- Casing Vibration

#### Machine Testing

- Test Plans
- Selection Of Test Equipment
- Site Inspection
- Acceptance Tests
- Baseline Tests
- Baseline Tests
- Resonance and Critical Speed Testing
- Fault, Condition, and Balance Tests
- Specifications
- Environment and Mounting
- Presentation of Data
- Reports

#### Periodic Monitoring

- Listing and Categorization
- Machinery Knowledge
- Route Selection and Definition
- Measures and Measurement Points
- Baseline Data
- Frequency of Data Collection
- Selection of Test Equipment
- Screening
- Trending
- Alarms
- Reports

#### Basic Balancing of Rotating Machinery

- Types of Unbalance
- Balancing Equipment
- Pre balancing Checks
- Measurements
- Relationship between Mass Unbalance and Phase
- Trail Weight Selection
- Balancing Pitfalls
- Vector Method with Trial Weight
- Weight Splitting and Consolidation
- Acceptable Vibration Levels

### Course Trainers / Facilitators :

Faculty for Refresher ISO 18436-2 CAT-II 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.

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

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