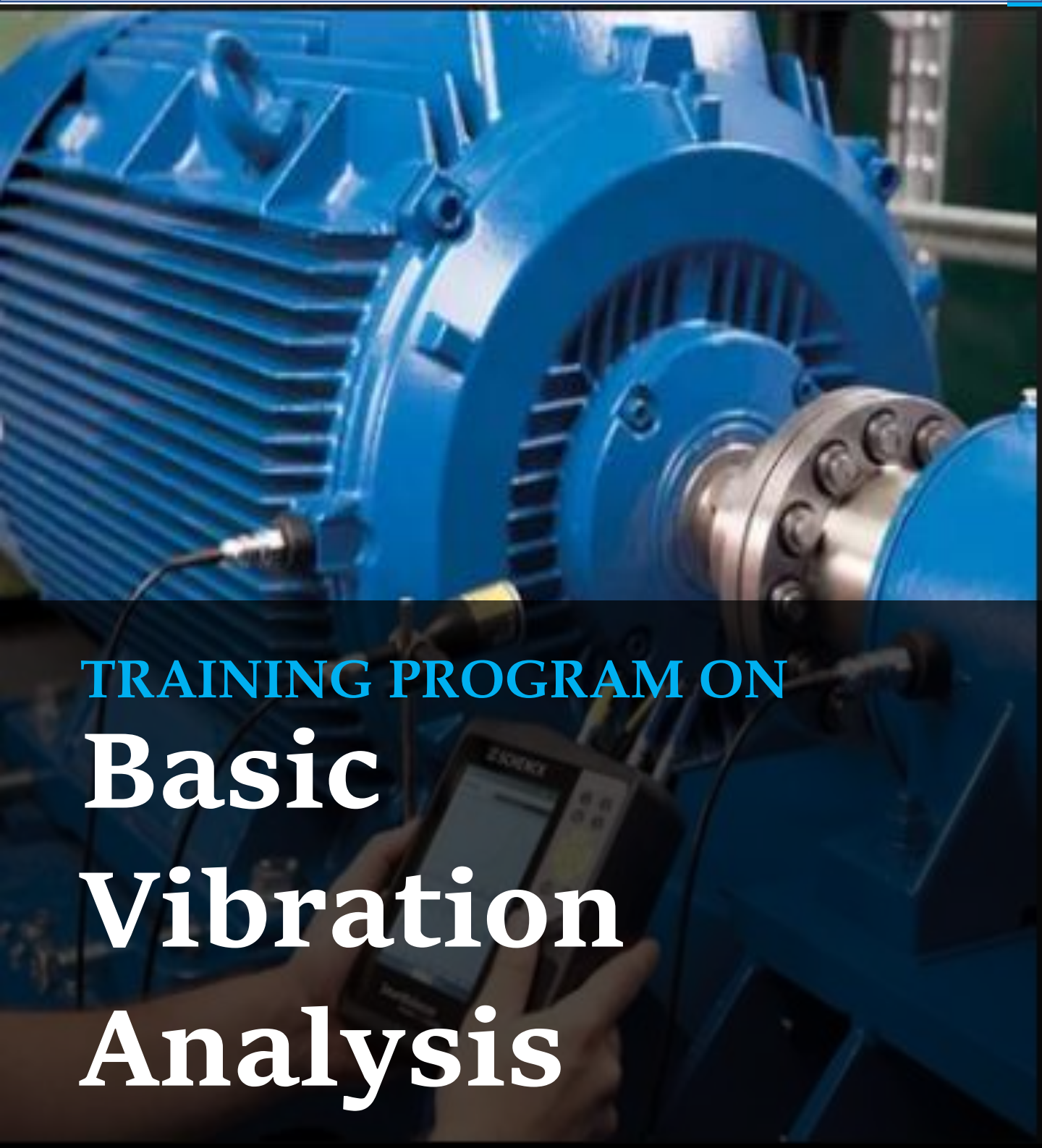


TRAINING PROGRAM ON

Basic Vibration Analysis

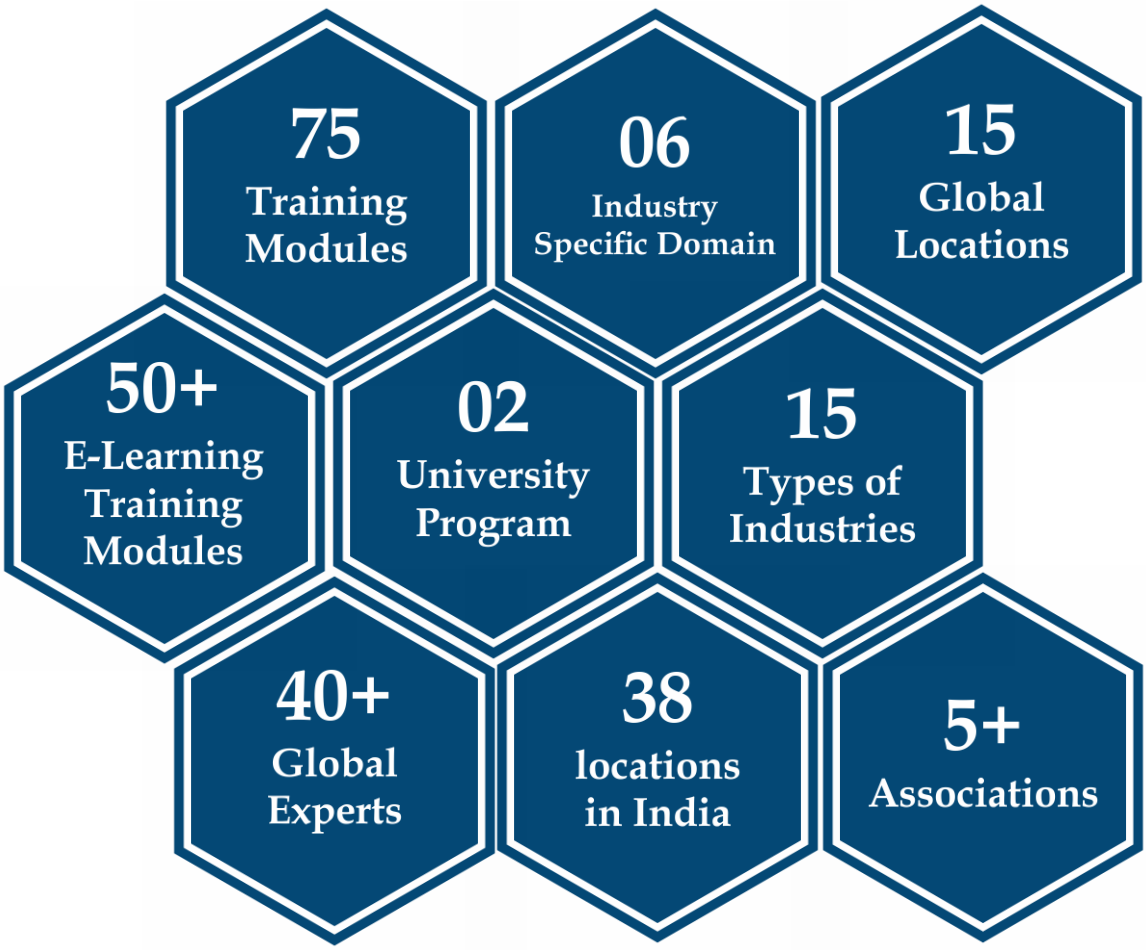
ABOUT ARRELIC TRAINING INSTITUTE

Arrelic Institute is focused to equip both industry professionals and college graduates with the skills and knowledge required for bridging the desire stare of workforce which industry needs to compete globally.

Arrelic Institute provides over 75 different type of customized training programs in the field of Reliability Engineering, Asset Management, Best Practice, Operation & Maintenance, Predictive Maintenance, NDT, Predictive Analytics, Quality, Risk & Safety.

Arrelic Institute conducts public trainings and workshops in 38 locations across India and 10+ International locations. We are working for large corporate house from 15 different types of industries ranging from Airlines, Automobiles, Cement, Defence Manufacturing, FMCG, Glass, Marine, Metals, Mining, Oil & Gas, Power, Pulp & Paper, Facility Management and Fertilizer.

ARRELIC INSTITUTE: AT A GLANCE



www.arrelic.com/offerings/training-and-development

ARRELIC AWARDS & RECOGNITIONS

NASSCOM®

TOP5

Won the Top 5 Startups in eastern India in Thieve 30 by NASSCOM

GLOBAL ENTREPRENEURSHIP SUMMIT INDIA 2017

Selected for GES – 2017, Hyderabad and showcased among top 100 Start-ups from India.

SMART FIFTY
50 Solutions to Transform India

TOP50

Emerged as one of the top 40 startups in #Smartfifty' – a search for solutions to transform India

PULSE THE VENTURE INSPIRING INNOVATION

Top 24 Start-ups selected over 1850 startups across India By CNBC.

NASSCOM® PRODUCT CONCLAVE

Selected for NPC – Bangalore and NPC – Kolkata for Product showcase.

TiE CON DELHI-NCR

Product showcased in TIECON – 2017 and selected through Govt. Of Odisha.

#startupindia

Startup India Recognize

Startup Odisha

STARTUP ODISHA recognised.

birac
Ignite Innovate Incubate

BIRAC finalist in SPARCH - 2017

web summit
LISBON, NOVEMBER 6-9, 2017

Selected for Web summit - Lisbon

hello tomorrow

Selected for Hello tomorrow, Paris Summit.

100 open startups

Selected and presented in 1000 open startups.

ABOUT THE TRAINING COURSE
Basic Vibration Analysis

In today's competitive market, companies are under increasing pressure to produce higher quality goods and services at lower production costs. A key component of the overall cost of manufacturing is maintenance and the key role of maintenance is to guarantee the reliability of the production plant. The crucial element for ensuring that maintenance is cost effectively delivered is the planning and scheduling of maintenance tasks. ***The foundation of excellence and achieving cost-effective equipment reliability starts with Maintenance Planning and Scheduling.***

Arrelic's Vibration Analysis Level -1 is a widely-used condition monitoring method. This course will start by providing you with an introduction to maintenance practises including technologies such as vibration analysis, thermography and oil analysis. Then after you will cover the theory behind vibration analysis and learn how to take vibration measurements and conduct basic analysis to diagnose faults in common types of equipment. The program is developed to understand the critical role of a vibration analysis program within an industrial maintenance concept to ensure the reliability of equipment.

The first level is very much a general introduction of Condition Monitoring to maintenance personnel who are working in industries with high demands on the skills of their maintenance engineers. It gives knowledge and motivation to get involved in the work of improving plant performance.

If organisations are to move toward an asset management environment with a focus on maximising equipment life, then the planner must be seen more as a whole of life Asset Management Planner rather than the Maintenance Planner of old. This course is the starting point for that transition.

LEARNING OBJECTIVES &
KEY BENEFITS OF ATTENDING THE WORKSHOP

By attending this technical training on **"Basic Vibration Analysis"** delegates will be able learn and deliver the following things.

- ✓ Maintenance practices and vibration condition monitoring
- ✓ Interpretation of the graphical representation of vibration
- ✓ Sources of vibration in equipment
- ✓ Requirements for data collection
- ✓ Basic analysis of data Basic corrective actions Correctly place sensors on equipment
- ✓ Set up and use a device to collect data
- ✓ Import and export collection routes
- ✓ Recognition of bad data during data collection

WHO SHOULD ATTEND ?

Basic Vibration Analysis training will help to master the basics of predictive maintenance as it applies to the analysis of machine vibration. The series covers the introduction to vibration analysis, theory, data collection, and data analysis.. People in the following roles should participate in this training:

- ✓ **Plant Managers/ General Manager/ VP**
- ✓ **Manager – Maintenance / Process/ Quality /Technical/Reliability**
- ✓ **Engineer - Maintenance / Process/ Quality/ Technical/Reliability**
- ✓ **Supervisor - Maintenance / Process/ Quality/Technical/Reliability**
- ✓ **Front-line Leaders**
- ✓ **Mangers – Business Essentials such as HR, Supply chain, Purchase, Finance etc.**

INDUSTRIES THAT CONCERN ABOUT

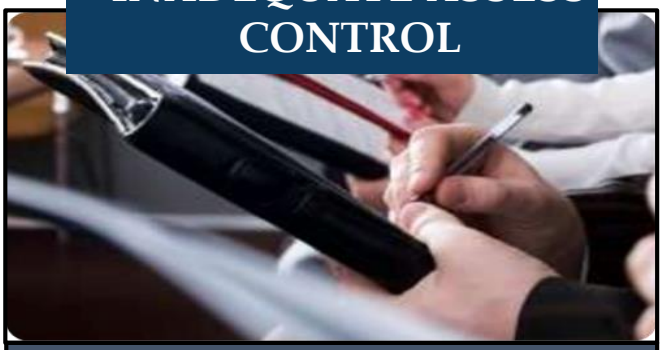
LOW PRODUCTIVITY

Conventional use of time-based approach for maintenance does not take into consideration the way assets are being utilized, their current condition and real world operating conditions.

HIGH DOWNTIME

Failure to curb unplanned downtime and lack of control over value chain processes lead to high costs , inefficiencies and poor compliance. These severely impacts the profit and industrial growth.

INADEQUATE ASSESS CONTROL



Industries lack the ability to interpret assets data and because of unavailability of proper predictive methods they are unable to predict equipment failures which leads to unplanned downtime.

HIGH MAINTENANCE COST

Increased competition, pressure to grow revenue & profit , tighter regulations, scarcity of raw material, fluctuation demand and obsolete technologies have impacted the way industries are being operated.

COURSE OUTLINE

DAY – 1

INTRODUCTION TO VIBRATION
- ✓ Types of Maintenance
- ✓ Theory of Vibration
- ✓ Instrumentation
- ✓ Programming measurements
- ✓ Diagnosis
- ✓ Vibration Analysis Program

VIBRATION ANALYSIS FOR MANAGEMENT
- ✓ Reliability of machines
- ✓ Basic theory of vibration phenomenon
- ✓ Startup and profitability of a vibration monitoring program.

INTERMEDIATE VIBRATION
- ✓ Theory of Vibration
- ✓ Measurement techniques
- ✓ Diagnosis

REVIEW & Q/A

DAY – 2

VIBRATION ANALYSIS TECHNIQUES
- ✓ Analysis Methods
- ✓ Diagnosis of different machines

ADVANCED VIBRATION
- ✓ Characteristics of temporal signal
- ✓ Initiation to the time domain
- ✓ Diagnostics

VIBRATION MONITORING AND ANALYSIS
- ✓ Vibration Analysis applications
- ✓ Vibration Analysis overview
- ✓ Vibration Analysis

VIBRATION ANALYSIS: DATA COLLECTION
- ✓ Infrared basics
- ✓ Types of Infrared Instruments
- ✓ Basic infrared theory
- ✓ Types of infrared problems

POST ASSESMENT

PROGRAM SCHEDULE

09:00 -10:30	Morning Session 1	13:30 -15:00	Afternoon Session 1
10:30 -11:00	Refreshments & Networking Break	15:00 -15:30	Refreshments & Networking Break
11:00 -12:30	Morning Session 2	15:30 -17:00	Afternoon Session 2
12:30 -13:30	Lunch	17:00 -17:30	Day review & Q/A