Precision Shaft Alignment & Machine Reliability Optimization

Misalignment costs millions.
Skilled alignment professionals save millions.

MEERIM VISIONARY TRAINING (FZE)
INSPIRING AMBITION AND SUCCESS

Training Program

5 DAYS - (30 TRAINING HOURS)

INSTRUCTOR-LED (CLASSROOM + PRACTICAL HANDS-ON)

Why Invest in This Training?

Why Invest in Precision Shaft Alignment & Machine Reliability Optimization?

If your facility relies on rotating machinery — motors, pumps, compressors, turbines, gearboxes — misalignment is silently eating your budget. It's responsible for 50–70% of rotating equipment failures globally. That means more downtime, higher maintenance spend, and lost production.

Investing in this course is not about theory it's about stopping the leaks in your plant's profitability.

When alignment is done right:

- Major reduction in breakdowns
- Longer bearing, seal, and coupling life
- Energy cost savings (3–10% per machine)
- Alignment issues fixed in hours, not days
- Improved asset availability + production reliability
- Safer operations with less vibration, heat & noise

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TECHNICAL PROPOSAL

PRECISION SHAFT ALIGNMENT & MACHINE RELIABILITY OPTIMIZATION

Training Audience:

- Rotating Equipment Engineers
- Mechanical Maintenance Technicians
- Reliability & Condition Monitoring Engineers
- Plant Supervisors / Inspectors
- Workshop Technicians

Training Overview:

Misalignment contributes to more than 50% of rotating machinery failures — leading to production downtime, premature bearing failure, increased energy consumption, and costly repairs.

This advanced, hands-on training equips maintenance and reliability professionals with the knowledge and practical skills to accurately diagnose, correct, and verify machine alignment to achieve best-in-class equipment performance

Training Objectives:

- Perform precision alignment using dial indicators & laser tools
- Diagnose soft-foot, run-out, and base problems
- Optimize shaft alignment for long-term machine health
- Apply ISO standards & machinery tolerances
- Reduce energy consumption and extend equipment lifespan
- Improve safety, productivity, and asset reliability
- Document corrections and alignment reports professionally

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KEY OUTCOMES

YOU'RE
PROTECTING YOUR
PLANT'S ASSETS.

Organizational Benefits:

- Reduce unplanned downtime & maintenance costs
- Increase availability of rotating assets
- Extend bearings, seals & coupling life
- Lower power consumption and operational stress
- Improve asset safety & environmental compliance
- ROI is usually achieved within the first corrected misalignment!

Personal Benefits:

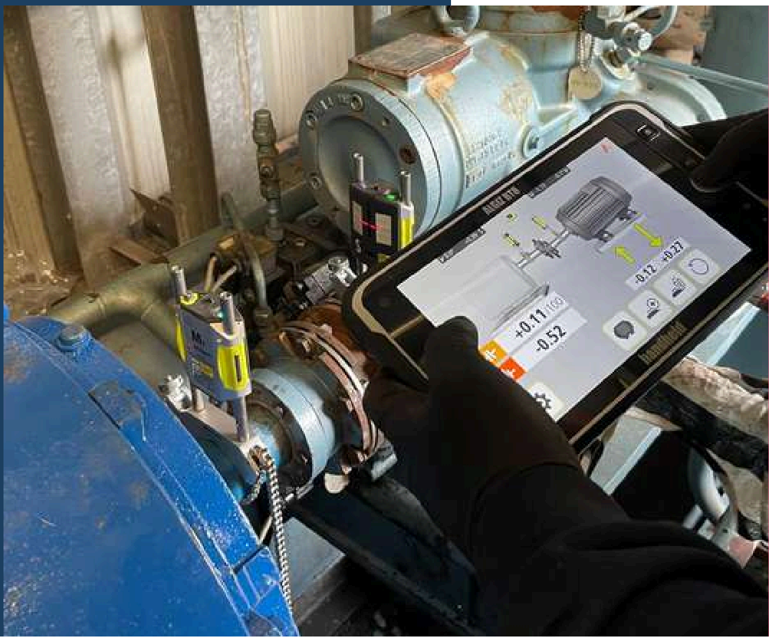
- Boost technical expertise → career advancement
- Become alignment subject-matter expert in your plant
- Reduce trial-and-error and increase confidence
- Strengthen reporting and decision-making skills

Training Methodology:

- *Instructor-Led Technical Delivery: Interactive sessions*
- *Hands-On Workshops*
- *Machine Condition Diagnostics – Practical exercises*
- *Real-World Case Discussions*
- *On-site coaching & real equipment support*
- *Vibration analysis integration module*
- *Problem-Solving Challenges*
- *Group Debriefs & Q&A*

WHAT MAKES OUR DELIVERY DIFFERENT?

- *80% hands-on — because machines don't fix themselves from PowerPoint slides.*
- *Tools and techniques aligned to international reliability standards*
- *Instructor with field experience who has corrected real misalignment issues costing millions*
- *Learning from each other's industry practices*



Precision Shaft Alignment & Machine Reliability Optimization

Training Modules:

Day 1 — Introduction to Alignment & Machine Dynamics

- Importance of precision alignment in industry
- Rotating equipment fundamentals
- Types of misalignment (angular, offset, compound)
- Detecting early failure indicators
- Alignment safety procedures
- Soft-foot theory & identification techniques Workshop session

Day 2 — Alignment Tools & Measurement Techniques

- Dial indicator methods: Rim-Face / Reverse Dial
- Measurement accuracies and errors
- Runout detection & correction
- Base conditions: shims, anchor bolts, thermal growth
- Hands-On: Reverse dialing practical exercise

Day 3 — Laser Alignment Systems

- How laser alignment systems work
- Real-time measurement and corrections
- Alignment of pumps, motors, compressors, blowers, fans
- Practice: Horizontal machine alignment using a laser system

Day 4 — Complex Machinery Alignment

- Vertical & angular drives
- Gearbox alignment techniques
- Belt-driven equipment alignment
- Alignment of Flexible vs. Rigid couplings
- Case study: Cement & Oil & Gas applications
- Workshop: Advanced field alignment scenarios

Day 5 — Troubleshooting, Reporting & Reliability Strategy

- Post-alignment verification checklist
- Documentation & reporting software
- Troubleshooting vibrating & high-temperature machinery
- Integration with condition monitoring programs
- Final Assessment + Practical Examination
- Assessment + Certification Ceremony

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TALK TO US

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MEERIM Visionary Training FZE:
Mobius Institute: An Authorized Training & Examination Center

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ISO 9001:2015 ISO 14001:2015 ISO 45001:2018