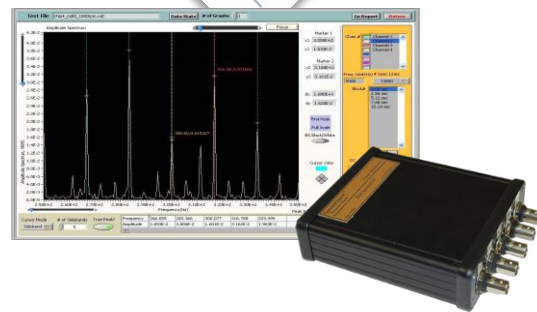
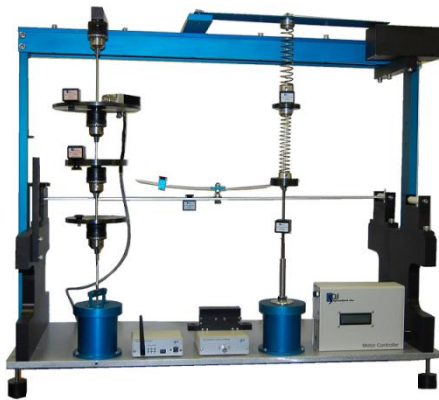
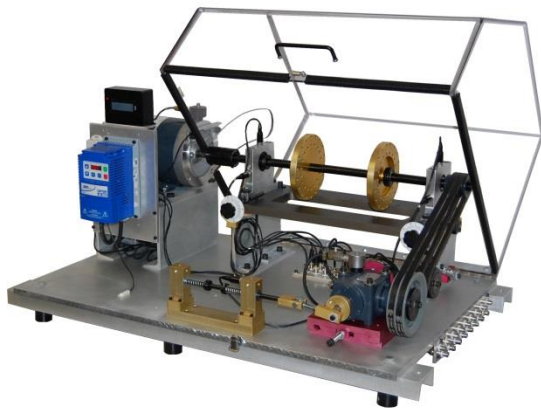


SpectraQuest Introduces

Vibration Analyst Training Solution for ISO Certifications



***Complete Package for Establishing On-site Hands-on
Vibration Analysis Training Program to
Maximize Asset Reliability***



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ISO Certification Trainings

Protect Your Asset Investment and Optimize Reliability

Condition-based predictive maintenance (PdM) is a reliable, cost-effective technique for monitoring and diagnosing machinery faults before they irreversibly damage your machinery and cause breakdowns that threaten to undermine product quality, delivery and overall customer service. It enables not only to predict machinery condition to maximize yields and efficiencies, but also to support planned, efficient shut downs with just-in-time parts delivery. The success of any PdM program ultimately depends on how accurately and easily vibration data can be measured, analyzed and understood. This requires well trained vibration analysts. Spectra Quest's vibration analyst training solution is a comprehensive tool to train and learn vibration analysis and machinery diagnosis. The training solution is designed to be completely self-sufficient and can be used stand-alone without any additional material or device required.

ISO Certification Vibration Analyst Training

The most comprehensive training program of its kind on the market, the Spectra Quest's vibration analyst training solution meets the needs of a broad range of vibration analysts, from novice to experienced professionals. It is an effective tool for introducing the concepts and methodologies of predictive maintenance and design considerations to engineering students. Companies can train their maintenance professionals using the training package, offering experienced technicians a way to upgrade their job skills and improve performance. The training solution is designed based on ISO 18436-2 standards and enhance your competency to guaranty successful completion of ISO CAT I to CAT IV certifications. The training package includes hands-on devices experience to learn vibration analysis from vibration fundamental to fault diagnosis and corrective actions. The purchase of a training package provides you with all of the components necessary (training handbooks, instructor's aid, simulators, transducers, and data acquisition and analysis software) for a fully functional, turnkey training system.

Benefits:

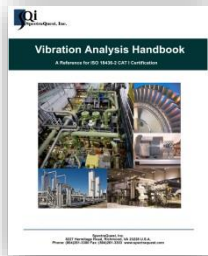
- ❖ Turn your present engineers into vibration experts.
- ❖ Accurate machinery problem assessment and identification as to root cause.
- ❖ Improve process and machinery reliability and satisfy ISO and QS expectations.
- ❖ Practice and experiment in laboratory environment to accelerate the learning process.
- ❖ Experiment to clear doubts to achieve correct diagnosis every time.
- ❖ Obtain ISO vibration analyst certifications for your engineers and technicians.

Training package includes:

- ❖ Hands-on devices to perform controlled experiments
- ❖ Complete condition monitoring Hardware & Software
- ❖ Comprehensive handbooks for ISO CAT I to CAT IV vibration analyst certifications
- ❖ Extensive lab exercise workbook
- ❖ Practice questions with answers
- ❖ Sample exams meeting ISO requirements
- ❖ Complete instructor's aid package
- ❖ Chapter by chapter PowerPoint presentation

ISO Certification Trainings

Comprehensive Handbooks for CAT I to CAT IV Programs



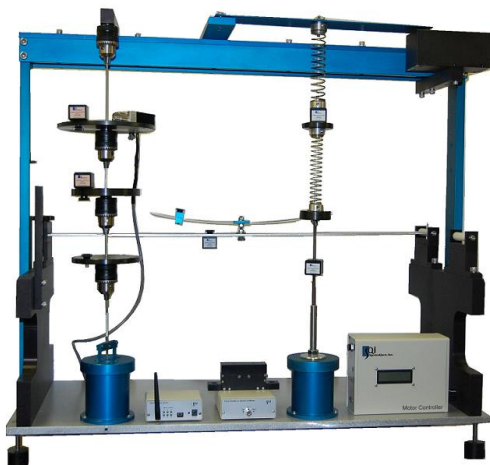
Spectra Quest's vibration analyst handbooks are developed to provide materials required for each ISO certification program. They contain comprehensive resources of vibration principles, data acquisition, signal processing, condition monitoring, fault analysis, corrective action, equipment knowledge, acceptance testing, standards, reporting, etc. written for novice to experienced into four volumes (developed based on ISO CAT I to CAT IV requirements).

The Best Hands-on Tool for Learning Machinery Diagnosis

Spectra Quest's Machinery Fault Simulator (MFS) is an innovative tool to study the signatures of common machinery faults without compromising production schedule or profits. The bench-top system has a spacious modular design featuring versatility, operational simplicity, and robustness. Each component is machined to high tolerances so it can be operated without conflicting vibration. Then, various faults can be introduced either individually or jointly in a totally controlled environment, making the MFS the best tool available for learning machinery diagnosis. MFS is the best tool to practice corrective actions such as alignment and field balancing.



An Ideal Tool for Learning Vibration Principles

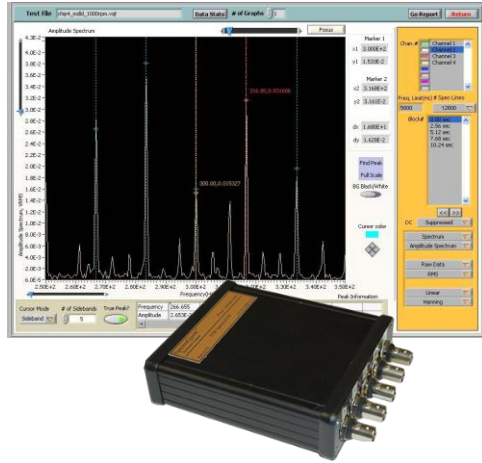


The Vibration Fundamentals Training System (VFT) is a turn-key integrated educational package for teaching/learning the fundamental principles of mechanical vibration as well as engineering mechanics. It provides both a comprehensive hands-on experimental device and an instrumentation package for performing laboratory exercises to enhance student understanding of vibration theory. The VFT clearly brings classical theory to life by providing a convenient mean to validate predictions and to demonstrate the influence of parameter changes on system response visually. Students can perform virtual experiments using the vibration simulation software and then verify the results with actual experiments thereby reinforcing the learning of difficult principles.

The MFS & VFT enhances your understanding of machinery fault signatures

ISO Certification Trainings

Data Acquisition System



SpectraQuest offers 4-channel USB data acquisition system. Combined with our VibraQuest data acquisition and analysis software, you can have a DAQ complete turnkey solution from one location. VibraQuest is an integrated solutions package for rotating/reciprocating machinery fault diagnosis, structural dynamics analysis and design, and acoustical analysis. VibraQuest is designed for quick data acquisition, review, and storage. The data file can be exported to a number of different formats. VibraQuest is capable of steady-state test, hammer/bump test, order tracking and start-up/coast-down test, data streaming to a file, time synchronous averaging, internal signal generation to verify analysis functions and system operation.

Complete Instructor's Aid Package



SpectraQuest training package includes complete materials required to teach ISO certification vibration analyst courses. The aid package contains chapter by chapter PowerPoint presentation, instructor manual, detailed instruction of designed hands-on experiments, practice questions and sample exams designed specifically for each ISO program.

Complete Preparation Package for ISO Certification



SpectraQuest training package includes extensive practice questions developed for each ISO certification vibration analyst program. Additionally, trainee can assess themselves before taking an ISO certification exam using sample exams provided. At the end of each training course, trainees will be competent enough to pass the corresponding ISO certification exam.

Minimum Required Training Hours by ISO 18436-3

| CAT I | CAT II | CAT III | CAT IV |
|----------|------------------|-------------------|--------------------|
| 30 Hours | CAT I + 38 Hours | CAT II + 38 Hours | CAT III + 64 Hours |

Body of Knowledge:

- ❖ Vibration Principles
- ❖ Data Acquisition
- ❖ Signal Processing
- ❖ Condition Monitoring
- ❖ Fault Analysis
- ❖ Corrective Action
- ❖ Equipment Knowledge
- ❖ Acceptance Testing
- ❖ Equipment testing and diagnostics
- ❖ Reference Standards
- ❖ Reporting and Documentation
- ❖ Fault Severity Determination
- ❖ Rotor/Bearing Dynamics

*Contents of this brochure are subject to change without notice