Predictive Maintenance Vibration Analysis Learning System

97-ME5A

ME
MECHANICAL

Student Reference Guide

97-ME5A

Optional Online eBooks

Learning Topics:

- Vibration Concepts
- Resonant Frequency
- Sympathetic Vibration
- Velocity Measurement
- Acceleration Measurement
- Spike Energy Measurement
- Vibration Meter Operation
- Vibration Dampening
- Vibration Isolation
- Vibration Analysis
- Severity Charts
- Troubleshooting

Amatrol's Predictive Maintenance Vibration Analysis Learning System (97-ME5A) adds to the Mechanical Drives 1 (970-ME1) Learning System to teach how to use vibration analysis to determine when to perform maintenance of power transmission components. Vibration analysis is one of the key techniques used in the field of predictive maintenance to determine when to service one or more of a machine's components, either making a replacement or adjustment, before a failure actually occurs. Learners will practice industry-relevant skills including how to use a vibration meter to take a vibration measurement, how and where to take measurements on various types of power transmission systems, how to analyze the results, and how to minimize vibration.

The Vibration Analysis training system includes a vibration meter and sensor attachments, AC constant speed motor, belt drive, shaft drive, vibration generator system, component test set, student learning materials for both theory and lab, and teacher's guide. Students will analyze vibration of both good and defective real-world components to better prepare them for real world applications.

AMATROL®

Hands-On Predictive Maintenance Skills Using Industrial-Grade Vibration Analysis Components

This predictive maintenance training system incorporates an industrial-quality hand-held vibration meter that makes three types of vibration measurements: velocity, acceleration, and spike energy. Learners will practice hands-on industrial skills using the meter to take vibration measurements on a variety of real-world power transmission systems including belt drives and shaft couplings. This system includes its own power transmission components. Amatrol supplies these industrial-grade, top-flight components in order to give the learner the opportunity to work with real-world mechanisms and gain experience they would normally only acquire on the job.
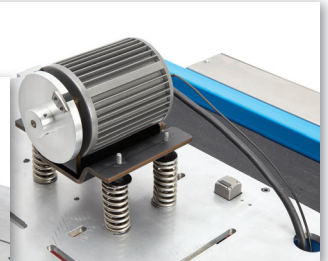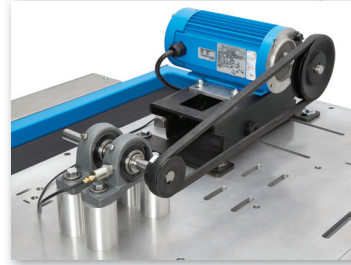

Industrial-Grade Components for 97-ME5A

Strong Vibration Analysis Curriculum with Optional Online eBook

This vibration analysis training system teaches students how to use probe orientation, placement, and vibration measurement to get meaningful data. Students then learn how to use this data in conjunction with trend analysis and severity charts to determine if the power transmission system is developing a problem and its root causes. The Vibration Analysis curriculum will teach learners how to compensate for vibration through isolation, dampening, and vibration reduction. In addition to the included printed curriculum, the Preventative Maintenance Vibration Analysis Learning System als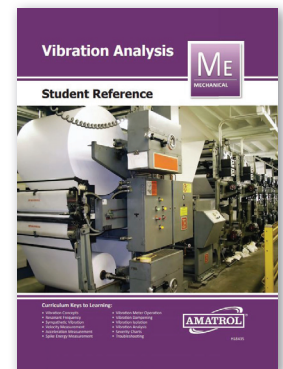o offers optional online eBook curriculum. Amatrol's eBooks look like a real book and allow users to flip between pages with ease.
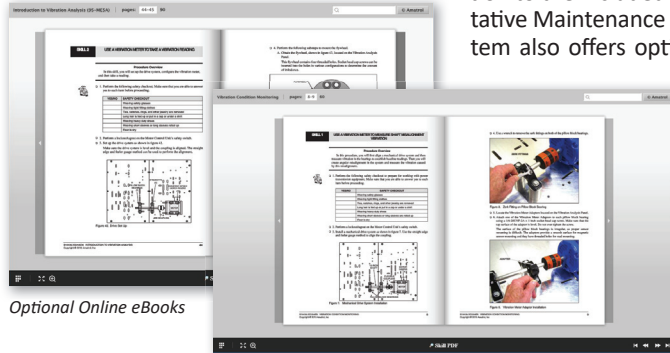
Optional Online eBooks

Student Reference Guide

A sample copy of the Vibration Analysis Learning System Student Reference Guide is included with the learning system. Sourced from the curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfect-bound book. If you would like to inquire about purchasing additional Student Reference Guides for your program, contact your local Amatrol Representative for more information.

AMATROL®
Certified ISO 9001:2015