



Work Identification

WI305 Introduction to Modal and Operating Deflection Shape Analysis

Recommended for:

Plant personnel requiring a basic understanding of Machinery Modal and Operating Deflection Shape Analysis techniques and practical application of the MEScope / MEScope VES Software.

Course objective

To provide a new user with a working knowledge of Experimental Modal Analysis, Operating Deflection Shape Analysis from a Field Engineer perspective. Upon completion of this course, the student will be able to create structural models of plant machinery, generate and import Experimental Modal and Operating Deflection Shape analysis measurements, and create machinery animations.

2009 course schedule

April 20–24	Myrtle Beach, SC
Aug. 17–21	Myrtle Beach, SC

Class starts Monday at 1:00PM and ends Friday at 12:00 Noon

2009 tuition

Public classes	\$1,995
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On-site
Tuition on request based on number of students

4 days

Course description

Day 1

Introductory analysis lecture. This portion of the course provides background information on Experimental Modal and Operating Deflection Shape Analysis topics with extensive case histories and instructor experience.

- Advanced analysis without complex mathematics
- Understand modes of simplified shapes (beams, plates, shells)
- Extrapolate simple structures to more complex systems
- Simplifying the frequency response function (FRF)
- Visual interpretation of modal data and modal parameters
- ODS and modal case histories

Day 2 & 3

Hands-On MEScope Software Training. The hands-on training utilizes the MEScope workbook. This is a practical step-by-step software guide and reference source that can be consulted over and over again. Complex methodologies are completely worked out for the student ensuring Accurate Analysis and Repeatable Results. Projects cover all major MEScope /MEScope VES software applications.

- Establish a project
- Create a structure
- Import data from your data acquisition platform
- ODS & ODS FRF data interpretation
- Modal data interpretation
- Acoustic & vibro-acoustic data interpretation
- Modal analysis curve fitting
- Structural dynamics modification (SDM)

Students are required to bring a laptop computer. MEScope software and training manuals will be provided.

Prerequisite

A working knowledge of plant machinery and machinery vibration concepts.