

Technical Description

Crane Nuclear offers to provide the services as described in this Technical Description subject to the pricing, terms and conditions delineated in the Commercial Description.

VOTES[®] Infinity Motor-Operated Valve Advanced Signature Analysis

Standard Class Size:	8 Students per Instructor
Course Duration:	4 Days
Prerequisite:	Crane Nuclear MOV Data Acquisition and Basic Analysis training course
Supplied Materials:	A training manual for each student.
Suggested Training Aides:	Three computers with Crane Nuclear Signature Software installed.
Suggested Attendees:	Personnel responsible for evaluating test data and verifying the MOV is operating within the established acceptance criteria.

Course Description:

This course will provide students with instruction in the signature analysis of the Crane Nuclear VOTES Infinity System data. The signature analysis techniques will include: review of basic analysis, advanced analysis tools and techniques, critical MOV parameters, actuator/valve degradations, and identifying the components of differential pressure tests. The students will also be led through report generating for MOVs and instructed in industry standard sizing equations.

Course Terminal Objectives:

Each student will be required to pass a written test with a minimum score of 80% in order to successfully complete this course. Upon successful course completion, the student will:

- Demonstrate manual analysis and VOTES Infinity Auto Marking capability.
- Demonstrate a working knowledge of all of the special analysis tools available in VOTES Infinity.
- Understand the traces that are automatically calculated by the software and the methods used in their calculation.
- Perform analysis of differential pressure traces.
- Identify various degradations in MOV traces and corresponding actions to correct.

Enabling Objectives:

After the completion of this course, the student will:

- Perform a basic signature analysis and automatic trace marking on a set of MOV data traces.
- Identify and understand the following special tools: measurement types, stem materials, actuator manufactures and models, editing and creating reports, math items, criteria, test descriptions, user settings, baseline and trending.
- Identify the special characteristics of traces acquired under differential pressure conditions.
- Identify various degradations that may be seen on data traces and means of correcting the problem.

Course Benefits:

- Increase the plant's self-sufficiency in MOV diagnostic testing.
- Increase the reliability of the plant's MOVs.
- Reduce the plant's cost of MOV diagnostic testing.