

## *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<sup>®</sup> Infinity Motor-Operated Valve Data Acquisition & Basic Analysis**

<b>Standard Class Size:</b>	6 Students per Instructor
<b>Course Duration:</b>	5 Days
<b>Prerequisite:</b>	A working knowledge of Limitorque <sup>®</sup> operators.
<b>Supplied Materials:</b>	A training manual for each student
<b>Suggested Training Aides:</b>	Two (2) Crane Nuclear VOTES Infinity and two (2) MOV test stands.
<b>Suggested Attendees:</b>	MOV cognizant engineers, electricians, mechanics, QC personnel, and operations personnel.

#### **Course Description:**

This course will provide students with instruction in the proper installation, operation, and maintenance of the Crane Nuclear VOTES Infinity Diagnostic System through classroom instruction, hands-on laboratory training, and accounts of testing experience. Upon successful completion, the student shall be able to correctly set-up and operate the Crane Nuclear VOTES Infinity System, correctly adjust actuator limit and torque switches to a specified criteria, and identify critical MOV parameters and common actuator/valve degradations through basic signature analysis techniques.

#### **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 the proper installation and removal of all applicable VOTES Infinity Diagnostic System transducers.
- Successfully acquire, store, and perform basic analysis of applicable signatures.
- Identify the causes of common MOV degradations and perform necessary adjustments to correct the deficiencies.

**Enabling Objectives:**

After the completion of this course, the student will:

- Explain the aspects and concept of the CRANE Nuclear VOTES Infinity diagnostic test system.
- Describe and identify various MOV transducers.
- Install equipment configure software.
- Understand data acquisition and basic analysis.

**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.