

## AOV Advanced Signature Analysis

This course provides instruction on the analysis of acquired Air-Operated Valve (AOV) performance test data utilizing the CRANE Nuclear Universal™ / VIPER™ 20 AOV Diagnostic System. The following AOV performance tests are individually detailed and discussed in depth:

- Baseline
- Hysteresis plus Deadband Repeatability and Linearity (HDRL)
- Deadband
- Step Response
- Step Sensitivity
- Step Resolution
- Frequency Response
- Static Calibration



Testing terminology, manual calculations and troubleshooting techniques are described each test. Basic AOV construction and function are overviewed. Relevant case studies are examined to demonstrate proper diagnostic procedures and common troubleshooting practices.

### TERMINAL OBJECTIVES:

Each student is required to pass a written examination with a minimum score of 80% to successfully complete this course. Upon successful course completion, the student shall possess the knowledge to perform/correctly identify:

- AOV diagnostic results
- test parameters and the calculations used in the analysis
- basic troubleshooting techniques to isolate problem areas
- AOV functional problems

### ENABLING OBJECTIVES:

At the conclusion of this course, the student will have an increased understanding of how to:

- identify factors that influence the proper function of AOVs
- determine AOV problems and implement effective solutions
- perform detailed signature analysis of acquired data
- determine potential degradations

### SUPPLIED MATERIALS:

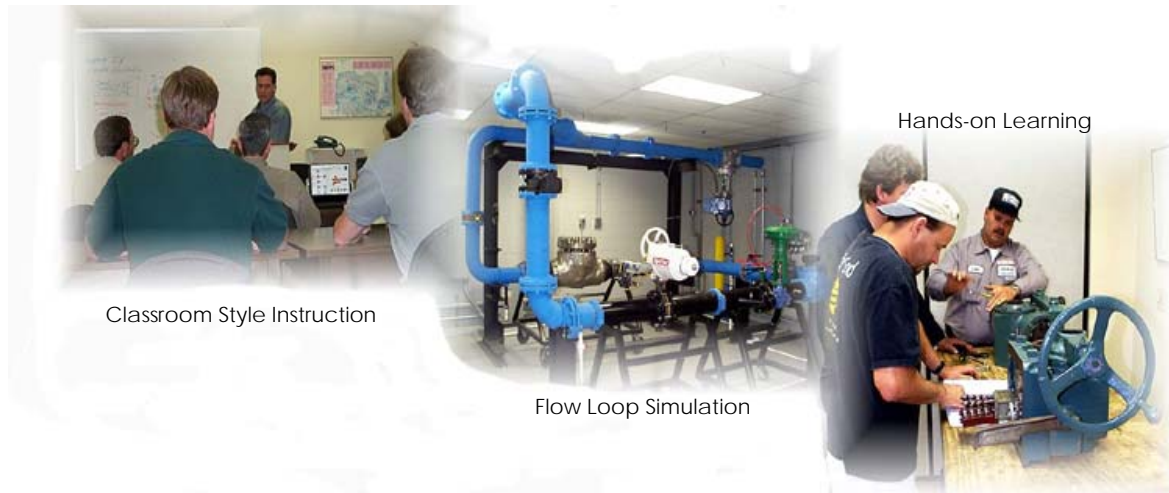
A *Training Manual* will be provided for each registered student.

In-class *Training Aides*, for courses performed at a CRANE Nuclear facility, will include all or some of the following: CRANE Nuclear AOV Test Equipment, Various Actuators, Instruments and Accessories.

## **AOV Advanced Signature Analysis**

### Registration Guidelines

<b>Standard Class Size:</b>	6 Students per Instructor
<b>Maximum Class Size:</b>	8 Students
<b>Course Duration:</b>	5 Days
<b>Course Pre-requisite:</b>	Universal™/VIPER™ 20 AOV Data Acquisition
<b>Suggested Attendees:</b>	Plant Instrument and Control Technicians, Engineers, QC and Operations personnel



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