ASSET PERFORMANCE MANAGEMENT

BENTLY NEVADA™ ORBIT 60 FOR TSI APPLICATIONS (5 DAYS)

Learn theory and practice on how to install and configure the Bently Nevada™ Orbit 60 Monitoring System including laptop connection, firmware updates, channel configuration, and bar graph displays with various system modules including infrastructure (SIM, CMM, Bridge, and PPM), inputs (PAV, PAD, Keyphasor, AC-LVDT) and outputs (Comm Gateway, Relays, and Recorder). Learn the various aspects of turbine supervisory instrumentation (TSI) measurements: Rotor Speed, Zero Speed, Rotor Acceleration, Eccentricity, Case Expansion, and Differential Expansion – Single DE, CIDE, Ramp DE.

Format

Duration: 35 hours **Schedule:** 5 Day(s) **Delivery:** Classroom

Who should attend

- Plant engineers and technicians involved in maintenance and troubleshooting of steam turbine TSI instrumentation using the Bently Nevada™ Orbit 60 Monitoring System.
- Plant managers and project managers overseeing steam turbine operation and maintenance.
- Control room personnel manipulating the operations of the steam turbine utilizing signals from TSI instrumentation.

Objectives

- Become comfortable connecting the laptop to the Orbit 60 system, using Orbit Studio software, and performing basic configuration routines to navigate through the software.
- Identify installation conditions affecting the correct operation of proximity transducer systems.
- Verify channel values in a radial vibration and thrust position measurements.
- Explain the role of the Orbit 60 TSI for machinery monitoring and protection.
- Identify Rotor Speed, Rotor Acceleration, and Zero Speed measurements with examples and displays.
- Identify Eccentricity, Case Expansion, Valve Position, and Differential Expansion theory, measurements, configurations and show bar graph displays.
- Use Orbit Studio software to configure the Orbit 60 TSI using various input modules in demonstrations, presentations, and workshops.

Required Prerequisites

Bently Nevada™ Orbit 60 Monitoring System

Program Outline

Day 1

- Orbit 60 Overview, Proximitor Operation, Radial Vibration

Day 2

- Orbit 60 Relays, Protection Groups & States, Thrust Position

Day 3

- Device Commands, Recorder Output, Bridge Module, TSI Applications, Speed Channel

Day 4

- Rotor Acceleration, Zero Speed, Eccentricity, Case Expansion Demos, Workshops, and Activities

Day 5

- Differential Expansion, CIDE, Single Ramp DE, Dual Ramp DE