

CEU Evaluation Request

(7 hours – Wastewater O&M)

Class: **Ebara Centrifugal Pump Maintenance & Troubleshooting**

Relevancy: Wastewater

Date: July 18, 2024

Location: Canby, OR

Instructor: Mike Panther

Description: This is a one-day course that will provide specific troubleshooting and repair for equipment in the wastewater treatment system. Specific training will be done partially via classroom setting, and then more practical in a shop environment.

Day 2

- 8:00-8:15 **Introductions**
- Ebara / OPE Introductions.
 - Municipalities Introduction.
- 8:15-8:45 **How Centrifugal Pumps Work**
- Ebara Pumps History & Background
 - Operating principles and dynamics of centrifugal pumps.
 - Everyday use of centrifugal pumps for the wastewater market.
- 8:45-9:15 **Standard Operating Procedures**
- Initial startup and shutdown of the equipment
 - Routine monitoring of the equipment
 - Offline storage and Safety Precautions.
 - Pump Identification
- 9:15-10:00 **Preventative Maintenance & Troubleshooting**
- Inspection procedure & PM intervals of each component
 - Lubrication Schedules & Checks
 - Spare Parts and Special Tools Required for Maintenance
 - Removal, repair, disassembly and re-assembly of equipment.
 - Equipment troubleshooting.
- 10:00-10:15 **Break**
- 10:15-12:00 **Live Training – Dismantling the pump for Repair**
- Removal of the rotating assembly
 - Removal of the impeller
 - Removal of the mechanical seals

Day 2 (Continued)

12:00-1:00 **Lunch Break (Lunch Provided)**

1:00-3:30 **Live Training – Assembling the pump after Repair**

- Installing the mechanical seal
- Installing the impeller
- Installing the rotating assembly
- Re-installing the pump back in service

3:30-4:45 **Summary & Final Questions**

3:15-4:30

(0.125) Lab Procedures and Compliance

- Proper sampling procedures. DMR recording and reporting.
- Discuss the requisition of supplies, materials and equipment.
- Discuss pertinent federal, state and local laws, codes and regulations.