



The Craun-Liebing Co.

Manufacturers' Representatives and Distributors
Tel: 216-228-7900 | Fax: 216-228-7905

2019 Gorman-Rupp Education Seminars

FUNDAMENTALS OF PUMPING

Ohio EPA Course No.: OEPA-B577052-OM

Contact Hours: 6.75

ONE DAY CLASS EVENT

Dates:

Monday, December 9, 2019
or
Thursday, December 12, 2019
(Classes are Identical)

Cost:

\$85.00 (Per Person)

Time:

8:00 a.m. – 3:45 p.m.

Location:



THE GORMAN-RUPP COMPANY
TRAINING CENTER
600 S. AIRPORT ROAD
MANSFIELD, OHIO 44903



FUNDAMENTALS OF PUMPING

Course Syllabus

8:00 - 8:30 a.m. Registration & Introduction

8:30 - 10:00 a.m. Centrifugal Pump Basics

- How Centrifugal Pumps Work
- Exploring Different Styles of Centrifugal Pumps
- How to Read and Use Pump Performance Curves/Charts
- Calculating TDH (Total Dynamic Head)

10:00 - 10:15 a.m. Break

10:15 - 11:30 a.m. Pump Forensics

(Troubleshooting & Maintenance)

- Pump Safety
- How to Correctly Use Gauges
- Noisy Operation – Mechanical, Hydraulic (Cavitation, Vortexing & Air Entrainment)
- Loss of Performance - Causes & Remedies

11:30 - 12:00 p.m. Lunch (Provided by Craun-Liebing)

12:00 - 12:45 p.m. Walking Tour of Gorman-Rupp's State of the Art Pump Manufacturing Facility

- View Machining Operation of Pump Components
- Pump Assembly & Testing Processes
- Finished Goods - Aftermarket Components & Pump Products

12:45 - 3:45 p.m. Work Group Breakout Sessions

A. Hydraulic Demonstration (Self-Priming Pump Theatre)

- Self-Priming -vs- Priming-Assisted Pumps
- Dry Priming -vs- Re-Priming
- Automatic Air Release Valves (Function and Application)

B. Glass Face Pump Demonstration

- Pump Cavitation (View Formation and Implosion of Vapor Bubbles)
- Troubleshooting with Gauges
- Vortexing and Air Entrainment

C. Interactive Pump Teardowns

(Submersible & Self-Priming Pumps)

- Proper Disassembly Practices and Techniques
- Pump components Review
- Lubrication
- Reassembly Tips and Tricks to the Trade
- Reviewing & Setting of Pump Tolerances/Clearances

3:45 p.m. (Q&A)

- **Completion of Class**

Complimentary Gifts Handed Out

Certificate of Completion will be Emailed