



The Craun-Liebing Co.

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

2019 Gorman-Rupp Education Seminars

FUNDAMENTALS OF ELECTRICAL

Ohio EPA Course No.: OEPA-B577075-OM

Contact Hours: 6.75

ONE DAY CLASS EVENT

Date:

Tuesday, December 10, 2019

or

Wednesday, December 11, 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 ELECTRICAL

Course Syllabus

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

8:30 - 10:00 a.m. - Fundamentals of Electricity

- How is Electricity is Produced and Transmitted
- Electrical Terminology (Electrical/Hydraulic Analogies)
- Electrical Safety
- Electric Motor Basics / Forensics

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

10:15 - 11:30 a.m. - Control Panel Basics & Elec. Diagrams

- Types of Control Enclosures
- Electrical Symbolology
- Key Elements of Electrical Diagrams
- Reading and Understanding Ladder Logic

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

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. Electrical Component Troubleshooting (Interactive – Hands-On)

- Ladder Logic Diagram application to Actual Component Circuitry
- Utilize Multimeters and Continuity Testers, etc.
- Identify Electrical Components and Functions

B. Working with Variable Frequency Drives (VFD)

- Product Details and Benefits
- Applications & Uses
- Basic Programming
- Troubleshooting and Fault Details

C. Understanding Level Controllers (Integrinex – Electronic Controller)

- Product Overview
- Programming Details (Level and Alarm Set Points)
- Simulate Changes in Sump and Verify Proper Functionality
- Discussion of Various Level Sensing Options

D. Understanding Electric Motors

- Product Details
- O&M Considerations
- Starting Methods
- Troubleshooting

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

- **Completion of Class**

Complimentary Gifts Handed Out

Certificate of Completion will be Emailed