

Electrical Fundamentals

This three-day seminar includes topics relating to industrial electricity.

Topics include concepts of electrical theory and math, electrical print reading, magnetism, and electrical safety. The course uses your plant's prints and diagrams to reinforce the print reading section. This course is designed for plant maintenance personnel.

I. Quick Math Review

- Manipulating Equations
- Exponents and Scientific Notation
- Metric Terms Used in Electricity
- Trigonometry

II. Basic Electrical Theory

- Atoms
- Conductors and Insulators
- Voltage
- Current
- Resistance and Resistors
- Ohm's Law Calculations
- Series Circuits
- Parallel Circuits
- Combination Circuits
- Kirchoff's Laws

III. Print Reading

- Symbols and Abbreviations
- Switches and Controls
- Motor Starters
- Speed and Motor Controls
- Device Numbers and Suffix Letters

IV. Magnetism

- Characteristics of Magnetism
- Magnetic Fields Around
- Current-Carrying Conductors
- Left-Hand Rule for Conductors
- Magnetic Field of a Coil

V. Electrical Safety

- Electrical Safety
- Magnitude of Current
- Let Go Current Value
- Duration
- Path
- Skin Resistance
- Emergency Response
- CPR-Qualified Personnel