



MAINTENANCE TROUBLESHOOTING INTERNATIONAL LLC

BIF-202

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BIF-202 BASIC INDUSTRIAL ELECTRICITY FOR THE FACILITIES MAINTENANCE TECHNICIAN

Fundamentals of electricity for individuals involved in the maintenance of buildings, hospitals, rest homes, city buildings, or commercial property. Practice checking with a meter for determining common problems in AC circuits. Emphasis on lighting and lighting circuits. Troubleshooting tripped breakers, GFI problems, loose wiring, and overloaded circuits. Adds depth to the building technician's skills for simple repairs and realize when problems require a professional electrician to be called. In this course you will learn how power gets to your facility, how transformers work, how to read a meter, how to check out a circuit, how to troubleshoot a motor, how to disconnect and reconnect a motor properly, and what to do when an overload trips. This course will spend quite a bit of time on lighting circuits—how to troubleshoot them, what can be done to improve them, and the best ways to maintain them. Incandescent, fluorescent, HID lighting, LED lighting, and ballast wiring. The classroom attendee works on the bench top with electrical trainers to wire circuits, test circuits, and inspect components. In our training center we have installed COVID killing overhead lamping which will be demonstrated.



BASIC ELECTRICITY

- Voltage, current and resistance;
- Ohms Law
- Series circuits - Parallel circuits
- Series parallel circuits
- AC and DC in plants
- Workplace electrical safety

ELECTRICAL TEST EQUIPMENT

- Multi meters
- How to use a voltage testers
- How to use a clamp-on ammeter
- Using a megohmmeter

ELECTRICAL WORKPLACE SAFETY

- OSHA and NFPA 70E
- Lock out tag out (LOTO)
- Hazards and dangers of electricity
- Ground faults
- Personal protective equipment (PPE)

UNDERSTANDING THE FACILITIES ELECTRICAL SYSTEM

- Single line diagrams
- Transformers
- Facilities Distribution
- Fuses and Circuit breakers
- Feeders & Low Voltage Disconnects

- Panel boards and branch circuits
- Motor Circuits for HVAC
- Lighting Circuits

NATIONAL ELECTRIC CODE

- Purpose and overview
- Definitions and terms

WIRE SELECTION

- Conductor, Insulation and Wire Size
- Race way - Conduit - Cable tray
- Fittings and boxes

INSTALLING AND WIRING EQUIPMENT

- Connectors — splicing — termination lugs
- Installing a branch circuit receptacle
- Installing a branch circuit-motor

BASIC TROUBLESHOOTING

- Understanding electrical symbols
- Troubleshooting branch circuits
- Troubleshooting motor circuits
- Checking and testing fuses and circuit breakers
- Troubleshooting lighting circuits

SINGLE LINE DIAGRAMS

- Understanding a single line
- Examination of a complete plant single line diagram
- How a single line diagram is used for an arc flash study
- How a single line diagram is used for a relay coordination study.

ELECTRICAL MAINTENANCE

- Preventive maintenance (PM)
- Predictive maintenance (PdM)

CLASS FORMATS AVAILABLE

- MTI Hands-On Center \$995/person
 - ZOOM Interactive \$995/person
 - On-Site (Your Location) Ask for Quote
- Quick Quote Available in 48 hrs.

CLASS DURATION AND HANDS-ON
 2-days, 15 hours of instruction
 55% to 60% hands-on activities
 Plenty of meter time

FREE BOOK ISSUED

Ugly's Electrical References
 (\$30 value)

Class Details: Each student will receive class books, work activity sheets, self-test progress evaluations, as well as questions from the instructor to make sure they understand the material presented. It is expected that an attendee will leave the class with the basic knowledge of the subject and possess new found skills to better equip them when they return to their job. A certificate suitable for framing will be issued to each attendee who successfully completes the course. Call, email or check the website for the next time this course is scheduled at the MTI training center or as a ZOOM interactive session. On-site sessions? Request a quick 48-hour turnaround quote. Revised: 03/01/2021