DAMUTH TRANE

TRAINING

Electrical Troubleshooting

Date: Tuesday, October 12, 2010
Time: 8-4:30 PM
Instructor: Elmer Franklin
Cost: $300.00 per student (organizations that send 3 or more may register at $275 per student)

Description: This course will give the attendee a basic knowledge of voltage, current and resistance relationships as applied to relays, motor control circuits and other types of control circuits. It also covers troubleshooting and installation of lighting circuits including 3-way and 4-way switches. In addition, the course offers hands-on labs in which students participate in a variety of exercises including wiring a circuit to a circuit breaker panel and analyzing the other circuits wired to the panel; draw, wire and power up a series and 2 parallel circuits with switches and lights; using a meter to measure the voltage on a thermocouple; wiring a motor starter and determine the proper overload heater element size, and testing a solenoid valve operation.

Course Objectives:

- Identify proper safety protection equipment for electrical maintenance and identify treatment for electric shock.
- Describe the proper use of hand tools used for electrical maintenance and proper care of double and single insulated tools, extention cords and lights.
- Demonstrate the procedure for de-energizing, tagging and locking out power feeds and the procedure to close a tripped circuit breaker, replace a fuse and describe the operation of a ground fault interrupter.
- Demonstrate the use of a voltmeter, ammeter, clamp-on ammeter, ohmmeter and electric consumption meter and identify which test instrument to use to locate troubles.
- Describe, sketch, wire and troubleshoot single-pole, 3-way and 4-way switch circuits.
- Describe the basic electrical concepts of current, voltage, resistance, electrical polarity, open, short and excessive resistance and current and define and apply Ohm's Law.
- Demonstrate solving circuit problems and describe the basic relationships of voltage, current, and resistance in a series, parallel and series parallel circuits.
- Describe relationship or watts to amps and volts and apply the power and energy concepts to determine power consumption, operating cost and other practical problems.
- Identify color coded resistors, capacitors, diodes, simple relays and control transformers and describe operating principles of a transformer and the affect varying load conditions will have on its circuit.
- Describe basic AC circuit principles.

Please fill out this form and fax it to Amanda Elliott at 757-558-9715 by Thursday October 7, 2010

Registration Information

Name: _____
Company: _____
Address: _____
Phone: _____ **FAX:** _____ **Email:** _____

Please note - a valid FAX number and/or email is required for class notices regarding cancellations and/or reminders

Names of other attendees from your organization:

_____
_____

Billing Information
Purchase Order #: _____
Credit Card Information
Type: _____ **Credit Card Number:** _____
Expiration: _____ **Name on Card:** _____
We will pay by check: _____