

TROUBLESHOOTING FOR THE JOURNEYMEN LEVEL TECHNICIAN



When a power system failure occurs, or major equipment breaks down, all eyes within a facility are focused on the operations and maintenance department. As this will probably be the most stressful event in your working career, knowing what to expect may help reduce stress and allow you to think more clearly during the event. Effective troubleshooting skills will significantly reduce the length of an outage or equipment breakdown, which is crucial to critical manufacturing process. However, effective troubleshooting begins well in advance of an unexpected outage.

This class presents a logical approach to troubleshooting electrical power systems and equipment. Resources for predicting the likelihood of equipment failure will be provided, and a systematic approach to placing a system back on line will be addressed as well. Common electrical devices and their operational requirements will be discussed, including comprehensive diagram analysis for troubleshooting will be demonstrated.

Anyone who works with power generation, transmission, or distribution systems should attend this course. Additionally, supervisors, managers, safety personnel, and those responsible for ensuring a safe work environment should also attend this course.

Course Duration: 16 hours

ELECTRICAL SAFETY

Shock Hazards
Burn Hazards from Arc Flash and Blasts
Personal Protective Equipment
Lock-Out and Tag-Out Procedures
Safe Work Procedures

Switches
Automatic Transfer Switches
Description of Components
Operation
Basic Maintenance
Troubleshooting

TEST INSTRUMENTS

Approved Test Instrument
Proper Use of Test Equipment
Calibration

TROUBLESHOOTING PROCEDURES

Testing and Evaluation
Planning
Evaluation
Recording
Observing Condition
A Focused Approach to Troubleshooting
The Six Steps of Troubleshooting
Basic Support Requirements
Documentation
Test Equipment
Operational Considerations
Case Studies
Lab and Practical Exercises

DIAGRAM ANALYSIS

Types of Diagrams
ANSI/IEEE Standards
Device Numbers and Identification

ELECTRICAL EQUIPMENT/SYSTEMS

Transformers
Circuit Breakers
Protective Relays

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