



MAINTENANCE TROUBLESHOOTING INTERNATIONAL LLC

AFS-302

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AFS-302 ARC FLASH SAFETY

The National Fire Protection Association (NFPA) standard for electrical safety in the workplace, 70E, is widely recognized as the best practices for electrical safety. This training course educates workers about the 2021 NFPA 70E and electrical safety work practices. This training instructs participants on the electrical safety skills needed to perform routine electrical maintenance tasks at less than 1000 volts just as they would in the field. At the end of this course an attendee will be able to inspect, use and maintain personal (PPE) and other protective equipment. The course allows an understanding how to safely maintain electrical equipment and reduce causes for injury. Learn how to verify an electrically safe work condition and perform maintenance on 480 volt motor control equipment. In addition, learning to perform assured equipment grounding conductor checks are covered. Anyone working around electricity would benefit from this course. Mechanics, electricians, millwrights learn to be safe.



General Requirement for Electrical Safety-Related Work Practices (Article 110)

- The Electrical Safety Program
- Training Requirements
- Relationships with Contractors
- Use of Equipment
 - Test Instruments
 - Portable Electric Equipment
 - Extension Cords
 - GFCI's
- Underground Electrical Lines and Equipment

Establishing and Electrically Safe Work Condition (Article 120) (ARTICLE 120)

- The six-step LOTO process

Work on or Near Exposed Energized Parts (Article 120)

- Limitations for working when exposed to energized parts
- Hazard analysis
- Energized Electrical Work permit requirements
- Energized Electrical Work permit Approval Process
- Description of Safe Work
- Energized Electrical Work permit Exemptions

Shock Protection Boundaries

- Shock Risk Assessment
- Establishing Shock Protection Boundaries
- Using the AC and DC tables
- Approach Requirements for Qualified Persons
- Approach requirements for Unqualified Persons

Arc Flash Boundary

- The Arc Flash Risk Assessment
- Establishing the Arc Flash Boundary
- PPE within the Arc Flash Boundary
- Equipment labeling requirements

OTHER PRECAUTIONS

- Alertness / Situational Awareness
- Blind Reaching
- Illumination
- Conductive articles being worn
- Conductive materials
- Confined or enclosed work space
- Doors or hinged panels
- Housekeeping duties
- Use of flammable materials
- Anticipating failure
- Routine opening and closing of circuits.
- Reclosing circuits after protective device operation

ASTM Labeling Chart Natural Rubber Electrical Insulating Gloves			
Class Color	Proof Test Voltage AC/DC	Max. Use Voltage AC/DC	Insulating Rubber Glove Label
00 Beige	2,500 / 10,000	500 / 750	10 ASTM D120 CLASS 00 TYPE 1 MAX USE VOLT 500V AC
0 Red	5,000 / 20,000	1,000 / 1,500	10 ASTM D120 CLASS 0 TYPE 1 MAX USE VOLT 1000V AC
1 White	10,000 / 40,000	7,500 / 11,250	10 ASTM D120 CLASS 1 TYPE 1 MAX USE VOLT 1000V AC
2 Yellow	20,000 / 50,000	17,000 / 25,500	10 ASTM D120 CLASS 2 TYPE 1 MAX USE VOLT 1000V AC
3 Green	30,000 / 60,000	26,500 / 39,750	10 ASTM D120 CLASS 3 TYPE 1 MAX USE VOLT 1000V AC
4 Orange	40,000 / 70,000	36,000 / 54,000	10 ASTM D120 CLASS 4 TYPE 1 MAX USE VOLT 1000V AC

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

2-days, 15 hours of instruction
 30% Hands-On

FREE BOOK

Ugly's 70E Electrical 2021 Reference (\$30)

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 ZOOM interactive. On-site sessions? Request a quick 48-hour turnaround quote. Revised: 01/10/2021