NFPA 79:
ELECTRICAL STANDARD FOR INDUSTRIAL MACHINERY

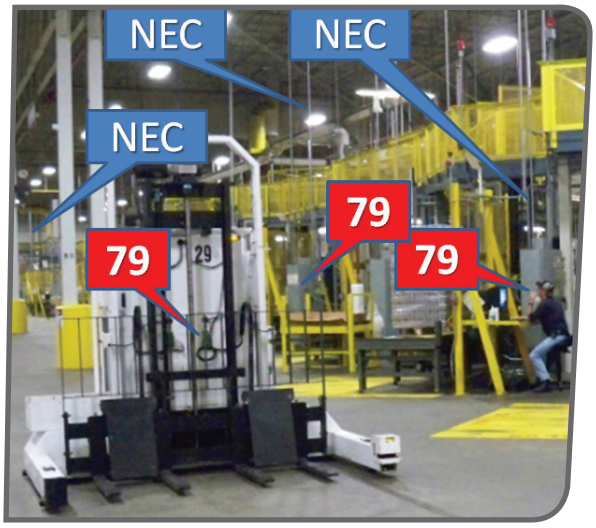
Understand the difference between NFPA 79 and NFPA 70E (NEC) when maintaining industrial machinery.

Get an overview of scope of the NPFA 79 and understand its relationship with other codes. Learn how to effectively use the Standard as a guideline for wiring, sizing conductors and overcurrent protection for industrial machines operating form a nominal voltage of 600 volts or less.

As a result you will learn preventative maintenance for equipment and systems, electrical, electronic and communication equipment.

AT THE END OF THIS COURSE YOU WILL:

1. Understand where NEC (NFPA 70) stops and NFPA 79 Starts
2. Repair equipment's electrical components correctly for safety, compliance, and longer equipment use
3. Understand equipment design so maintenance tasks (procedures) can be more effective



CLASS FORMAT:

Classroom

Updated to 2015 Edition

STANDARD CLASS SIZE:

NTT recommends a class of no more than 35 participants to obtain the best results.

NTT PROVIDES:

- 2-day (16 contact hours) of on-site instruction
- NFPA 79 Code Book & Workbook
- Classroom consumables
- Completion certificates
- Shipping and instructor travel logistics

CLIENT PROVIDES:

- Classroom of 500 square feet or greater
- Projection screen, white board and/or flip chart(s)

WHO SHOULD ATTEND:

Workers responsible for repairing and maintaining the electrical components of industrial machines:

- Safety directors
- Electrical contractors
- Electricians
- Maintenance electricians
- HVAC maintenance and Repair Technicians
- Plant & facility maintenance technicians
- Building engineers

NTT Training

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COURSE AGENDA

INTRODUCTION TO NFPA 79
- Machine history
- The need for training and developed standards
- NFPA 79-1 and Article 670
- Major changes in 2015

MODERN MACHINE TOOL ELECTRICAL EQUIPMENT
- NFPA 79 compared to NFPA 70, 70B and NEC
- Evolution of machinery and NFPA 79

DEFINITIONS
- NFPA official definitions
- Determination of ordinarily accepted meaning
- Referencing terms

GENERAL OPERATING CONDITIONS
- Electrical supply voltage
- Continuous allowed variation
- Limits for temperature, humidity, and altitude

INCOMING SUPPLY CIRCUIT CONDUCTOR TERMINATIONS AND DEVICES FOR DISCONNECTING AND REMOVING POWER
- Incoming supply circuit conductor and termination requirements
- Supply circuit disconnecting device requirements
- Handle requirements

PROTECTION FROM ELECTRICAL HAZARDS
- Test finger
- PELV control panels
- Residual voltage

PROTECTION OF EQUIPMENT AND GROUNDING
- Overcurrent protection of control devices and equipment
- Fuse and wire sizing
- Equipment grounding

CONTROL CIRCUITS AND CONTROL FUNCTIONS, OPERATOR INTERFACE AND CONTROL DEVICES
- Control circuit and control function requirements
- Operating device arrangement and color
- Control panel arrangement

CONTROL EQUIPMENT LOCATION, MOUNTING, AND ENCLOSURES
- Enclosure construction compliance
- Subpanel mounting
- Cabinet working space depths and prohibitions

CONDUCTORS, CABLES, AND FLEXIBLE CORDS
- Sizing
- Correction factors
- Protection

WIRING PRACTICES
- Color codes
- Material and sizing of rigid metal conduit

ELECTRIC MOTORS
- Motor Installation
- Motor Protection

LIGHTING AND ACCESSORIES
- Accessory requirements
- Lighting installation and protection

MARKING AND SAFETY SIGNS
- Required Marking
- Safety Sign Placement

TECHNICAL DOCUMENTATION
- Documentation Types
- Required Documentation

TESTING AND VERIFICATION
- Types of testing
- Testing requirements

SERVO DRIVES AND MOTORS
- Protection for Servo Drives and Motors