

ATCW-1060: FIRE STOP AND OVERHEAD SAFETY

Cuyahoga Community College

Viewing: ATCW-1060 : Fire Stop and Overhead Safety

Academic Term:

Spring 2019

Subject Code

ATCW - AIT-Communication Workers

Course Number:

1060

Title:

Fire Stop and Overhead Safety

Catalog Description:

Covers the purpose and systems of fire stopping of communication transport systems including types, governing codes and standards and oversight agencies for installation and testing qualifications. Includes the safety standards including hazard recognition and operator responsibilities with respect to aerial platforms.

Credit Hour(s):

1

Lecture Hour(s):

1

Requisites

Prerequisite and Corequisite

Departmental approval: admission into the CWA apprenticeship program.

Outcomes

Course Outcome(s):

I. Discuss the codes and standards, systems and methods of installation fire stopping including definite types and outcomes.

Objective(s):

1. Identify the locations within new building construction and building renovations that require fire stopping.
2. List the testing assembly qualifications, types and parameters of products used for fire stopping.
3. Define the terms related to fire stopping.
4. List the different types of fire stopping materials and cable available.
5. Explain the purpose of fire stopping on worksites where telecommunication transport systems are installed.
6. Identify building codes and standards that regulate material selection and fire stopping requirements in the construction industry.
7. Identify the oversight agencies used for fire stopping methods and testing.
8. Discuss the surviving dynamics of fire tests with respect to product components, dimensions and anchoring techniques.

Course Outcome(s):

II. Discuss the OSHA and American National Standard Institute (ANSI) standards that pertain to aerial lifts.

Objective(s):

1. Recognize potential worker hazards with respect to aerial lift operation.
 2. Discuss the responsibilities of the equipment user and/or operator.
 3. Identify the different types of aerial lifts and discuss the respective uses of the equipment.
 4. Demonstrate the ability to safely operate an aerial lift.
 5. Identify and discuss the manufacturers operating specifications regarding machine modification and limitations.
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Methods of Evaluation:

1. Quizzes
2. Tests
3. Class participation

Course Content Outline:

1. Fire stopping
 - a. Locations
 - i. Walls
 - ii. Floors
 - iii. Ceilings
 - iv. Roof
 - b. Materials
 - i. Concrete
 - ii. Masonry
 - iii. Ceramic
 - iv. Gypsum
 - v. Metal
 - vi. Wood
 - c. Purpose
 - i. Flame spread potential
 - ii. Life saving
 - iii. Economic
 - iv. Critical systems protection
 - v. Building liability reinforcement
 - vi. Fire rating integrity
 - d. Terminology
 - i. Fire stopping
 - ii. Intumescent material
 - iii. Viscosity
 - iv. Systems
 - v. Mechanical systems
 - vi. Endothermic
 - vii. Ablative
 - e. Codes and standards
 - i. Municipal
 - ii. State
 - iii. National
 - iv. Building Industry Consulting Services International BICSI
 - v. National Electrical Code NEC
 - vi. Occupational Health and Safety Administration OSHA
 - vii. National Fire Protection Association NFPA
 - f. Qualifications testing
 - i. Fire barrier
 - ii. Construction
 - iii. Penetrations
 - iv. Fire stopping materials
 - g. Testing agencies
 - i. Underwriters Laboratory UL
 - ii. Authority Having Jurisdiction AHJ
 - h. Surviving dynamics
 - i. Pillows
 - ii. Sleeves
 - iii. Putty
 - iv. Sheets
 - v. Pads
 - vi. Wraps
 - i. Anchoring

- i. Collars
 - ii. Plates
- 2. Aerial lifts
 - a. OSHA regulations
 - i. General requirements
 - 1. Modifications
 - 2. Limitations
 - ii. Specific requirements
 - 1. Securing equipment
 - 2. Controls operation
 - 3. Load limits
 - iii. Training requirements
 - 1. Operation
 - 2. Hazards
 - b. Manufacturers operating procedures
 - i. Testing
 - ii. Guidelines
 - iii. Lifting capacity
 - iv. Uses
 - c. Worker hazards
 - i. Falls
 - ii. electrocution
 - iii. Pinch points
 - iv. Physical
 - v. Tip point
 - d. Responsibilities
 - i. User
 - 1. Job management
 - 2. Maintenance
 - 3. Inspections
 - ii. Operator
 - 1. Operating instructions
 - 2. Training
 - 3. Inspections
 - 4. Workplace hazards
 - e. Types
 - i. Articulating
 - ii. Extension boom platform
 - iii. Aerial ladder
 - iv. Aerial platform
 - f. Operation
 - i. Inspection
 - 1. Tires
 - 2. Fluids
 - 3. Hydraulic lines
 - 4. Visual
 - ii. Controls
 - iii. Machine operations
 - 1. Raising
 - 2. Lowering
 - 3. Forward/reverse
 - 4. Positioning
 - 5. Booming
 - 6. Travel
 - g. Physics and simple machines
 - i. Lever
 - ii. Center of gravity
 - iii. Boom angle
 - iv. Boom length

- v. Speed
- vi. Momentum

Resources

Independent Electrical Contractors Chesapeake and Western Electrical Contractors Association. *Electrical Pre-Apprenticeship Workforce Development*. 2013 Edition. Cengage Learning Clifton Park, NY, 2013.

BICSI. *Information Technology Systems Installation*. 6th Edition. BICSI Tampa, Florida, 2012.

National Fire Protection Association (NFPA). *National Electric Code 2011 (NEC)*. 2011 Edition. NFPA Quincy, Massachusetts, 2010.

Resources Other

www.safety-compliance.com

www.uniquefirestop.com

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