Workforce Education & Jurisdiction

FCIA Firestop Containment Worker Education +Program

Bill McHugh, FCIA Executive Director
Bob Hasting, FCIA Past-President, TEA Chair
Tracy Smith, FCIA Past-President, Standards Chair

FCIA – Firestop Contractors International Association

- FCIA Members
  - Firestop Contractors
  - Firestop Manufacturers
  - Firestop Consultants
  - Firestop Distributors, Reps, Friends

- FREE MOP/Spec - Specifiers @ AE, Independent
- FREE Life Safety Digest, Webinars
- 3rd Party Contractor Company Accreditation Programs
- 3rd Party Inspection Agency Accreditation Programs
- Firestop & Fire Resistance Industry Advocacy
- Chair, ASTM Inspection Standards
- Tools for Specifiers, Contractors, Consultants, Manufacturers, Distributors, Manufacturers Reps
- Join FCIA Today! www.FCIA.org , Membership

“TOTAL FIRE PROTECTION”

- Effective Compartmentation
  - Fire Barriers, Fire Walls/Floors, Smoke Barriers
  - Firestopping, Fire Dampers, Swinging and Rolling Fire Doors, Fire Rated Glazing
- Detection & Alarm Systems
- Sprinkler Suppression Systems
- Education & Egress–
  - Building Owners & Managers, Building Occupants and Firefighters

“DIIM”

- Barriers are for Safety – DIIM
  - Properly ***Designed*** and Specified
    - ***Tested and Listed Systems*** – Directories,
  - Professional ***Installation*** - Companies
  - Properly ***Inspected*** – Commissioned
  - ***Maintained*** **-** Annually –
    - NFPA 101
    - International Fire Code
    - International Property Maintenance Code
    - It’s required by Code
    - Minimize Liability
    - Protect Occupants

Firestop Products become SYSTEMS

- After Installation…
- **‘Field Erected Construction…Assemblies…**
- **Tested to…’**
  - Standards - ASTM E814/UL 1479–UL 2079, ASTM E 1966, ASTM E 2307, ULC S-115, FM 4990, ASTM E 2837, ASTM E 3037
  - **F Rating - Flame**
  - T Rating – Temperature
  - H Rating – Hose
  - **L Rating – Smoke**
  - W Rating – Water

Graphics – 3M

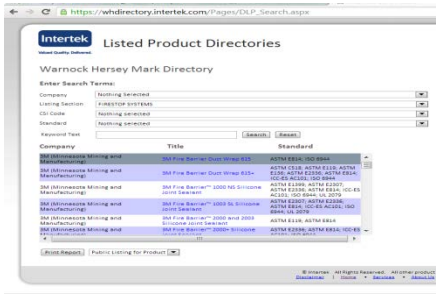
Products become Systems
Hose Stream = Impact/Shock Test

Products become SYSTEMS

- **Fire Rated Systems Directories –**
  - **FM Approvals**
  - **Intertek**
  - **UL Fire Resistance Directory**

Systems Selection & Analysis…Not as easy as it looks…

ApprovalGuide™



Engineering Judgments/EFRRA

- Variances to Systems at Site ? – Now What…
  - **First Action in Process**
    - **Find another system** – Same Manufacturer
    - **Find another system –** Different Manufacturer
    - **If no system exists in either case**….
  - **Second Action –**
    - ***Engineering Judgment*** – **"EJ"**
    - ***Equivalent Fire Resistance Rated Assembly – "EFRRA"***
  - ***Based on engineering, IFC Protocol***

International Firestop Council – Manufacturers – firestop.org

IFC Guidelines for Evaluating Engineering Judgments

‘Construction industry professionals, building officials, fire officials, firestop contractors and other stakeholders need appropriate guidelines for evaluating and using such judgments.’

As such, IFC developed *Recommended IFC Guidelines for Evaluating Firestop Systems in Engineering Judgments.*

IFC EJ Guidelines - Engineering Judgments for firestop systems should:

1. Not be used in lieu of tested systems when available;

2. Be issued only by a firestop manufacturer's qualified technical personnel or in concert with the manufacturer by a knowledgeable registered Professional Engineer, Fire Protection Engineer, or an independent testing agency that provides listing services for firestop systems;

3. Be based upon interpolation of previously tested firestop systems that are either sufficiently similar in nature or clearly bracket the conditions upon which the judgment is to be given. Additional knowledge and technical interpretations based upon accepted engineering principles, fire science and fire testing guidelines

   (e.g. ASTM E 2032 – Standard Guide for Extension of Data from Fire Endurance Tests,

   ULC Subject C263E – Criteria for Use in Extension of Data from Fire Endurance Tests,

   or ASTM E2750 – Standard Guide for Extensions of Data for Penetration Seals)

   may also be used as further support data;

IFC EJ Presentation Guidelines – What's Seen?

***IFC recommends** that these guidelines be considered when evaluating whether any firestop system engineering judgment meets minimal requirements. Questions concerning the EJ request should be addressed to the initiator of the judgment.*

***FCIA Recommends** that the manufacturer on their Engineering Judgement state that the EJ will pass if subjected to actual fire tests based on the ASTM E 814, 1966, 2307, 2837, or UL 1479, 2079 test standards.*

INSTALL FIRESTOP SYSTEM

Firestop Sealant, MW installation, SAFELY, to Tested and Listed System Limits

= Firestop System

Pack

1

Apply Sealant

2

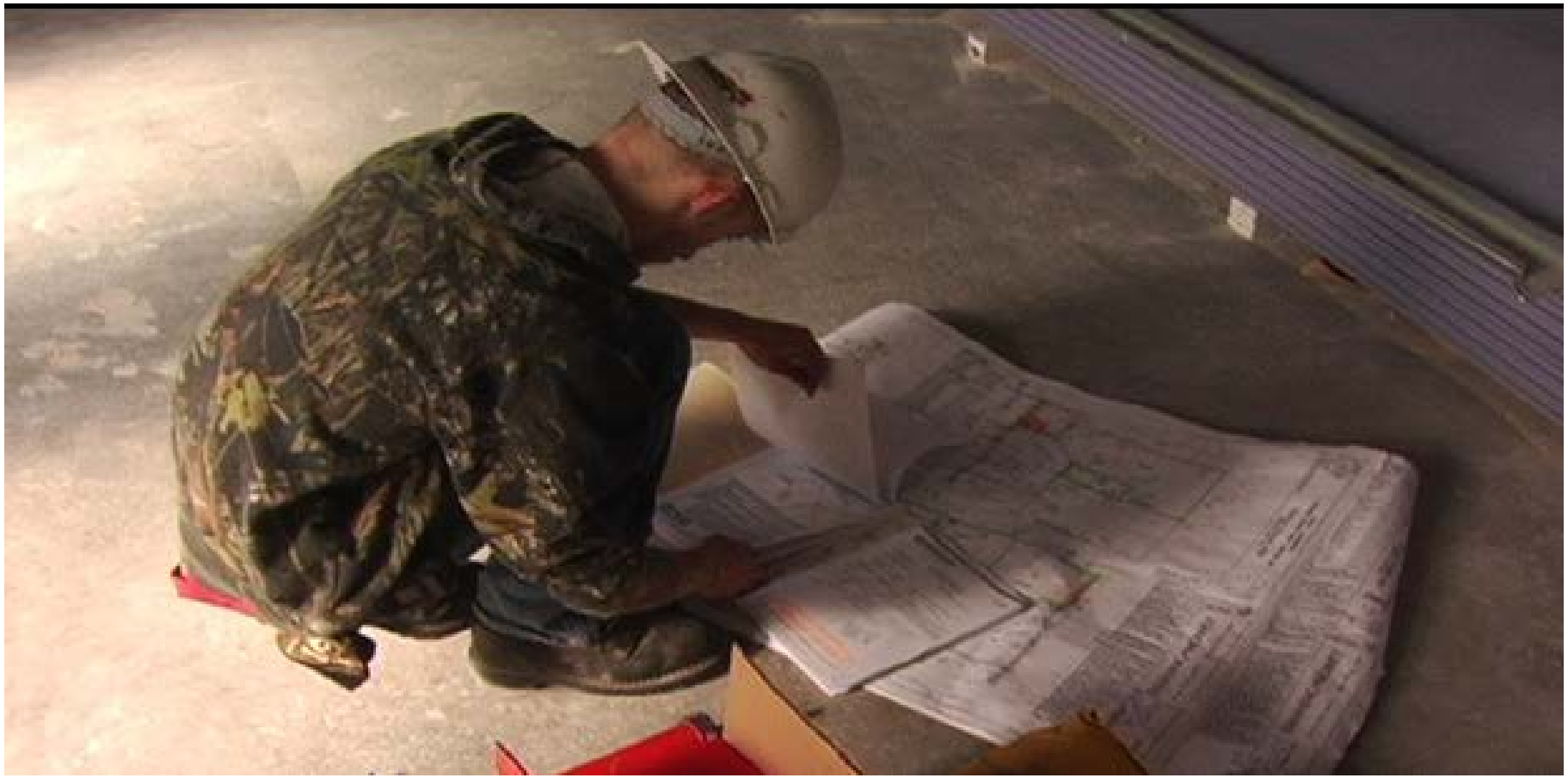
Tool/Smooth

3

Walls - BOTH SIDES

STI Graphic

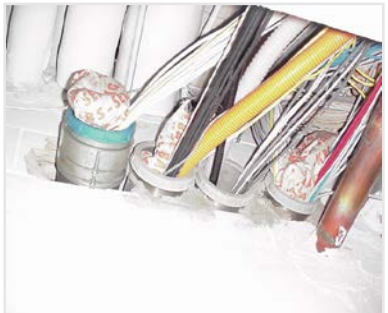
Firestopping is a Trade
I – Installation – Listed Systems



Installation – Who?

- Firestopping wrong, missing
- Systems Documentation?
- As Built Documentation??

Conclusion –
Without Single Firestopping Trade….
fire & life safety risks



3 Firestop Installation Methods

- **Each Trade**
  - “He/She who pokes hole, fills hole”
- **Multiple Contracts**
  - Firestop Contractors, Trades
- **Single Source Firestop Contractor**
  - ***FCIA Member in Good Standing***
  - ***FM 4991, UL, ULC Qualifiied***

Why Contractor Qualifications?

- **Firestopping Ratings - F, T, H, L W**
- **Zero Tolerances?**
  - **Annular Space Sizes, Gap Sizes**
- **Product Properties**
  - **Movement**
  - **Compatibility**
  - **Storage, Application, Curing Temps**
- **SYSTEMS DOCUMENTATION**

Firestop Contractor Qualifications

1. **Bought at Hardware Store, etc.**
   - Contractor or Individual?

2. **Manufacturer Trained Individuals**
   - 1 hour program
   - ½ day program
   - 2 day education

3. **ULC Qualified, FM 4991 Approved Companies**
   - 3rd Party Verified ***Company*** Management System
   - ***Individuals*** Pass 3rd Party Exam
   - ***Individual*** Knowledge – FCIA MOP
   - All Manufacturers Products Covered
   - ***Company gets Approved or Qualified, not Individual***

Firestop Contractor Qualifications

- **Association Member**
- Insurance – Classification?
  - Specialty Firestop Contractor?
  - Plumber, other trade??
- Workforce – Educated as Firestop/Containment Workers
- Bonding Capability
- Project References & Experience
- **Management System reviewed by….**
  - **FM 4991, UL or ULC, Manufacturer Accredited??**

FM & UL/ULC – 4 Components

1. Office Facility Quality Management System Audit
2. Field – Jobsite Audit
3. Employ a person
   - UL/FM Firestop Exam @ 80% or better
   - DRI if employed by Approved/Qualified Firm,
     - ***Designated Responsible Individual (DRI)***
4. Annual Audit

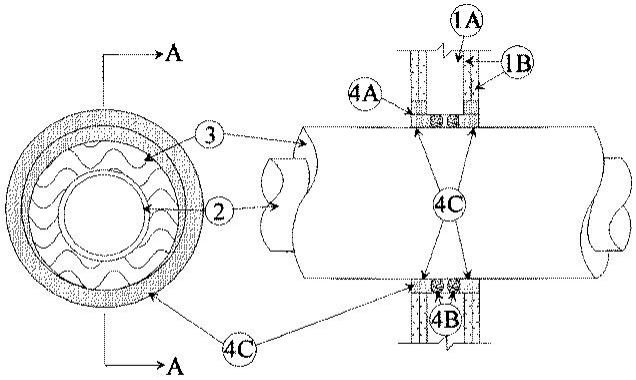
FM APPROVED 4991

Underwriters' Laboratories of Canada
Laboratoires des Assureurs du Canada
Qualified Firestop Contractor Program

Underwriters Laboratories Inc.
Qualified Firestop Contractor Program

1. FM, UL/ULC Company Audit of Management System (MS)

- Employee Training & Education
- Systems Selection
- Communicate systems to Field
- Material Controls
- Systems installation “protocol”
- Labeling
- Record keeping - Variance Procedures
- Non-Conformances
- Documentation
- Project closeout



CONFIGURATION A

2. Company MS Jobsite Audit by ULC, FM or UL

- Verification of firestop systems Processes
- Verify Management System Works
- Verify Company "communication"
  - Office to field, field to office
- "Culture of Quality…"

- Adler Photo

3. DRI – Company Appoints DRI

- **Pass Rigorous Firestop Examination**
  - FCIA Firestop Manual of Practice
  - Firestop Systems Selection & Protocol
  - Management System Knowledge
- Keep CEU's – 6 FM, 10 UL, ea. 3 yrs.
- Retested every 3 years (FM Only)
- One DRI per Approved Contractor Location

FM APPROVED 4991

ULC Underwriters' Laboratories of Canada
Laboratoires des Assureurs du Canada
Qualified Firestop Contractor Program

UL Underwriters Laboratories Inc.
Qualified Firestop Contractor Program

4. Annual Audit
FM 4991 UL / ULC

- Continued satisfactory performance
    - Quality Manual Implementation
- Documented - Archived record keeping
- Employee Training Documentation
- Jobsite Visit
- DRI CEU Verification
- **Find @www.fcia.org**

UL-ULC/FM 4991Contractor Company Benefits

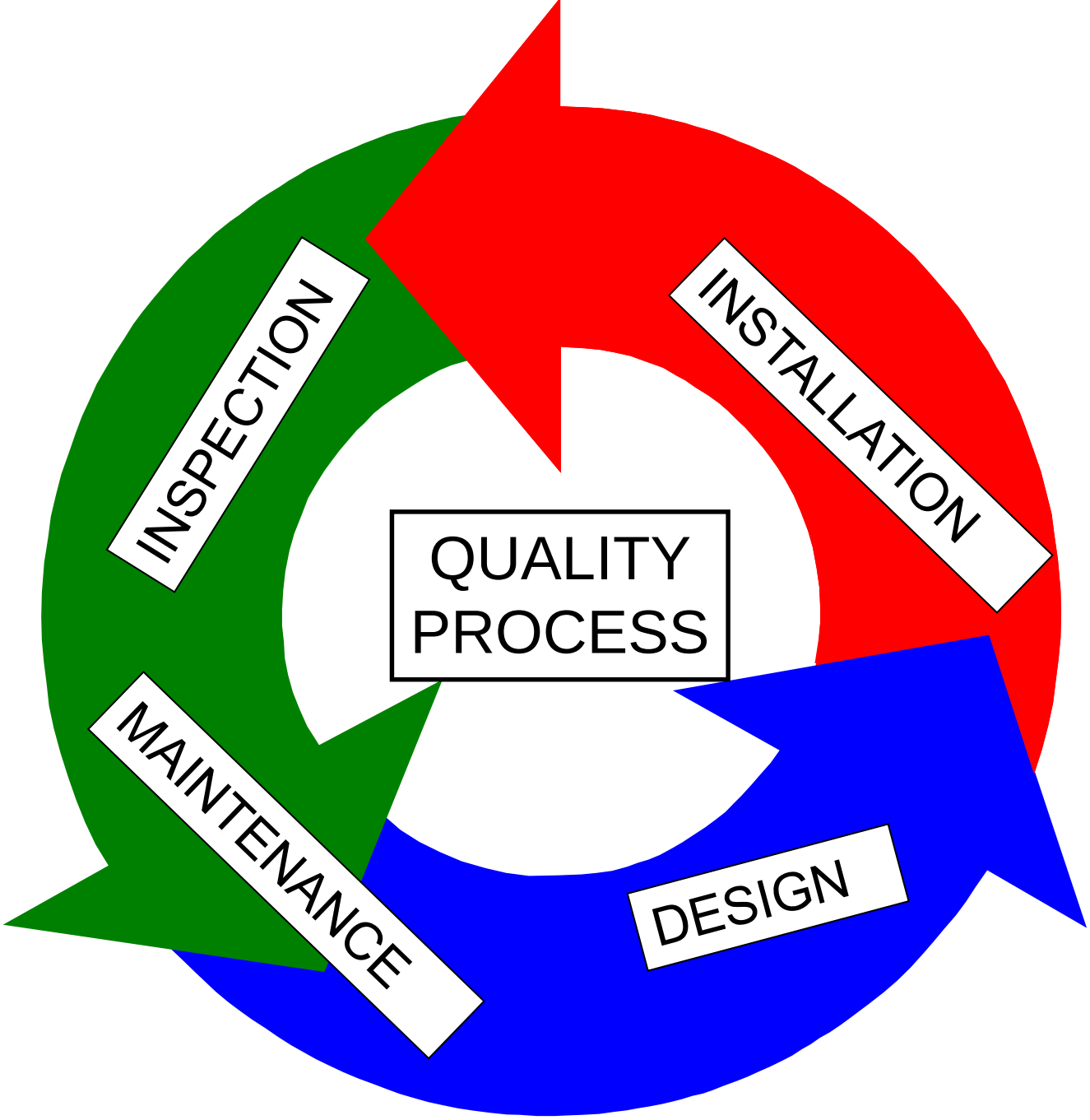
Quantified Differentiation …

- **Focus on the Company & Individual**
- Investment in Company Procedures
- Investment in People Education
- Investment in FCIA Manual of Practice
  - Project Successful Proven Contractor
  - Education, Training, Accountability

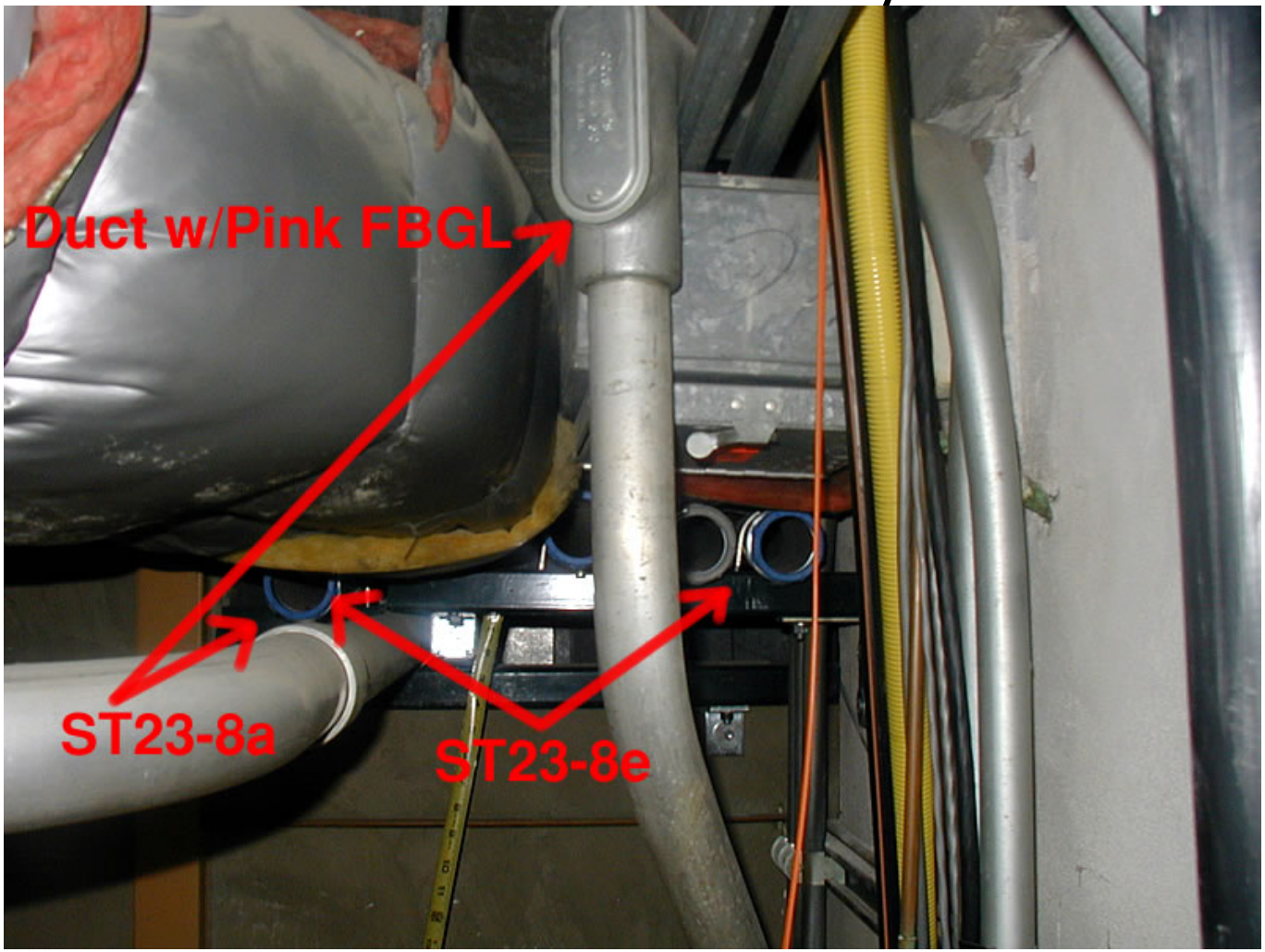
    = Reduced Risk – Life, Property, Business

Firestopping is a Trade
Specs State Contractor Qualifications

- **FM 4991 – Standard for the Approval of Firestop Contractors**
- **UL-ULC Qualified Firestop Contractors**
- **FCIA Members**
- **FM & UL Programs Require Worker Training Documentation AND Systems Documentation**
- **Codes – Not required in IBC**
  - **Submitted at National Building Code of Canada**


INSPECTION
INSTALLATION
QUALITY
PROCESS
MAINTENANCE
DESIGN

Installation & Inspection Systems Selection & Analysis



Firestopping is a Trade
I – Inspection

- **Contractor Self Inspection**
  - Verify Management System validity
  - FSCW Inspects Own Work in Addition to SIA
- **Manufacturer Inspection?**
  - Does not exist … Survey, maybe
- **Special Inspection/Commissioning**
  - Independent 3rd Party
  - Destructive, Non Destructive
  - Specified Frequency
  - Inspection Agency Accreditation – IAS AC 291

Firestop Installation & Inspection

- ASTM E 2174/ ASTM E 2393 – *"Inspection Process"*





I – Inspection –
Code Requirements

Definitions

[A] APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been *approved*. [IBC 202. Definitions]

[A] APPROVED. Acceptable to the *building official* or authority having jurisdiction.

[IBC 202 Definitions]

I – Inspection – Code Requirements

SPECIAL INSPECTOR. A qualified person employed or retained by an *approved* agency and *approved* by the *building official* as having the competence necessary to inspect a particular type of construction requiring *special inspection.* [IBC 202. Definitions]

I – Inspection – Code Requirements

1704.2.1 Special inspector qualifications. The special inspector shall provide written documentation to the building official **demonstrating his or her competence** and relevant experience or training**. Experience or training shall be considered relevant** when the documented experience or training **is related in complexity to the same type of special inspection activities for projects of similar complexity and material qualities.** These qualifications are in addition to qualifications specified in other sections of this code.

The **registered design professional in responsible charge** and engineers of record involved in the design of the project **are permitted to act as the approved agency and their personnel are permitted to act as the special inspector for the work designed by them, provided they qualify as special inspectors.**

Inspection Firm & Individual Qualifications
ASTM E 2174 - ASTM E 2393

- Inspector Personnel meet at least one criteria…..
  - 2 years experience (Construction, Field), education, and credentials acceptable to AHJ
  - Accredited by AHJ
  - Meet ASTM E699

- **NEW Inspection Agency *Company* Qualification – IAS AC 291 – W/Individual Certs.**

INTERNATIONAL ACCREDITATION SERVICE
Leading Accreditors Since 1975

Firm and Individual Qualifications IAS AC 291

- Inspector Firm shall have at least one staff..
  - PASS UL or FM Firestop Exam
  - 1 year Quality Assurance

    Or…
  - PASS UL/FM Firestop Exam, *and* PE, FPE, Registered Architect, or
  - PASS UL/FM Firestop Exam, *and* Education by Certified Agency

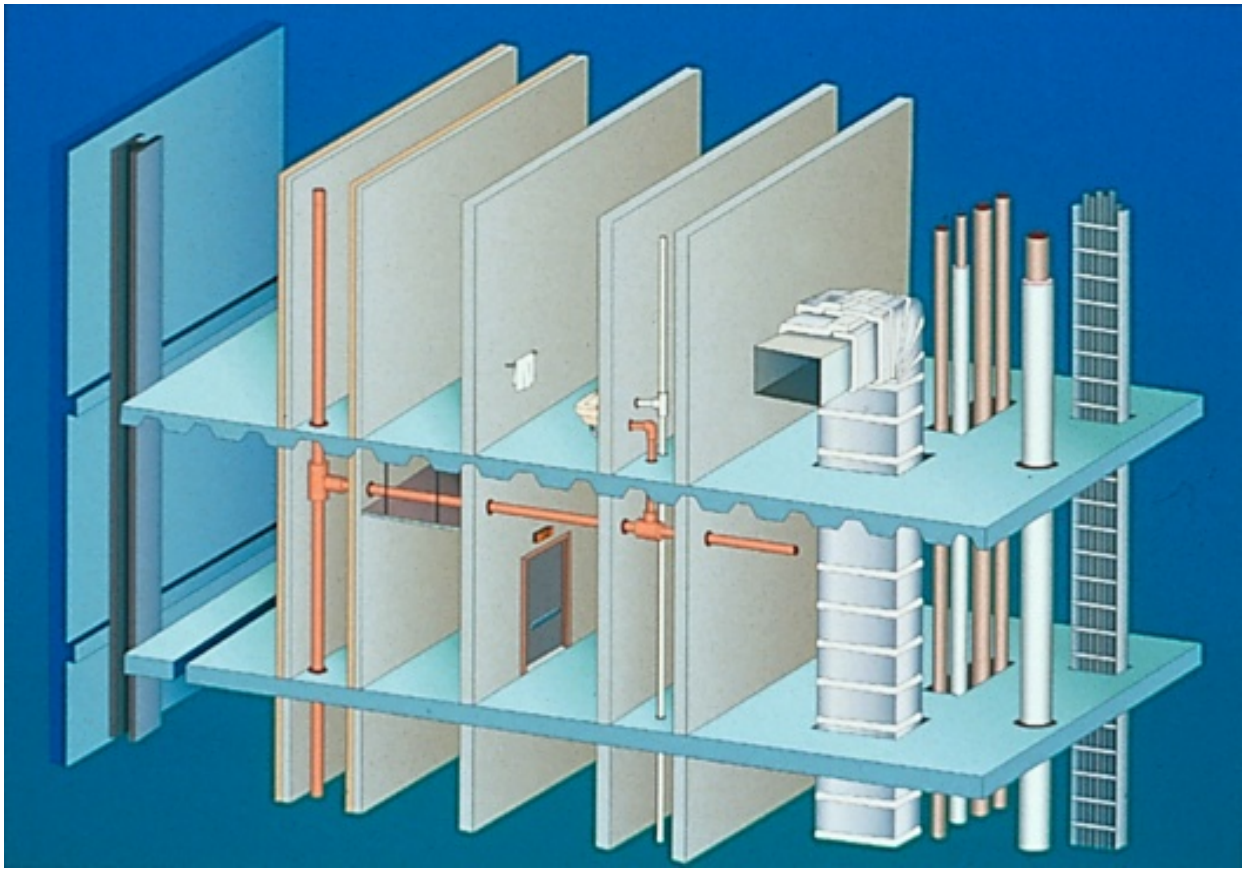
Individual Qualifications
ASTM E-3038

- Two years experience in Firestop Industry or 4 years in installation or systems selection.
- Licensed Design Professional
- Pass Exam @ 80% Acceptable to AHJ & directly related to scope of standards and inspections
  - IFC, FM, UL-ULC Exams
- Education
  - Associations – 6 hours
  - Several Manufacturers – 2 x 4 hours

Inspection in Codes
ASTM E 2174 - ASTM E 2393

- NFPA 101 / 5000 - Chapter 8 - Annex
- 2012 International Building Code
  - CH 17 – Special Inspections
    - Buildings with occupied floors 75’ & higher above lowest Fire Department Access
    - Occupancy Type III, IV, Chapter 16 Table 1604.5
- Abu Dhabi International Building Code
- Submitted @ National Building Code of Canada

M – Maintenance (& Management)



Fire Code Requires Fire & Smoke Resistance Maintenance Firestopping Workers …

- **International Fire Code**
- **NFPA 101**
- **National Building Code of Canada**
- **UAE Fire and Life Safety Code of Practice**
- **Frequency – ANNUAL INSPECTION**

Existing Firestopping is a Trade

- **Who does the Inspection/Survey?**
  - **Depends on Service Provider**
  - **Management?**
  - **Superintendents?**
  - **Foremen?**
  - **Workers?**

National Fire Protection Association - NFPA 101-2012

- **SECTION 4.5.8 Maintenance, Inspection, and Testing.**
- **4.5.8.1 Whenever or wherever any device**, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature **is required for compliance** with the provisions of this Code, **such device**, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or other feature ***shall thereafter be continuously maintained*** in accordance with applicable NFPA requirements or requirements developed as part of a performance-based design, or as directed by the AHJ. [101:4.6.12.1]

National Fire Protection Association - NFPA 101-2012

- **4.5.8.2 No existing life safety feature *shall be removed or reduced*** where such feature is a requirement for new construction. [101:4.6.12.2]
- **4.5.8.3*** **Existing life safety features obvious to the public, if not required by the Code, *shall be either maintained or removed*.** [101:4.6.12.3]
- **4.5.8.4 Any device**, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature **requiring periodic testing, inspection, or operation** to ensure its maintenance ***shall be tested, inspected, or operated*** as specified elsewhere in this Code or as directed by the AHJ. [101:4.6.12.4]
- **4.5.8.5 Maintenance, inspection, and testing *shall be performed under the supervision of a responsible person who shall ensure*** that testing, inspection, and maintenance ***are made at specified intervals*** in accordance with applicable NFPA standards or as directed by the AHJ. [101:4.6.12.5]

International Fire Code Maintenance

SECTION 703
FIRE-RESISTANCE-RATED CONSTRUCTION

703.1 Maintenance. The required fire resistance rating of fire-resistance rated construction (including walls, fire stops, shaft enclosures, partitions, smoke barriers, floors, fire resistive coatings and sprayed fire resistant materials applied to structural members and fire resistive joint systems) ***shall be maintained***. Such elements shall be ***visually inspected by the owner annually*** *and* properly repaired, restored or replaced when damaged, altered, breached or penetrated.

Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings, **and holes** made for any reason ***shall be protected with approved methods*** capable of resisting the passage of smoke and fire.

2015 International Fire Code Maintenance

SECTION 703
FIRE-RESISTANCE-RATED CONSTRUCTION

703.1 Maintenance. The required *fire-resistance rating* of fire-resistance-rated construction, including, but not limited to, walls, firestops, shaft enclosures, partitions, *smoke barriers*, floors, fire-resistive coatings and sprayed fire-resistant materials applied to structural members and fire-resistant
joint systems, shall be maintained. Such elements shall be visually inspected by the *owner* annually and properly repaired, restored or replaced where damaged, altered, breached or penetrated. Records of inspections and repairs shall be maintained..

2015 International Fire Code Maintenance

SECTION 703
FIRE-RESISTANCE-RATED CONSTRUCTION

703.1 Maintenance. (continued) Where concealed, such elements shall not be required to be visually inspected by the *owner* unless the concealed space is accessible by the removal or movement of a panel, access door, ceiling tile or similar movable entry to the space. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings and holes made for any reason shall be protected with *approved* methods capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self- or automatic-closing doors of *approved* construction meeting the fire protection requirements for the assembly.

2015 International Fire Code Maintenance

SECTION 703
FIRE-RESISTANCE-RATED CONSTRUCTION

703.1 Maintenance. (continued) 703.1.1 Fireblocking and draftstopping. Required *Fireblocking* and draftstopping in combustible concealed spaces shall be maintained to provide continuity and integrity of the construction.

703.1.2 Smoke barriers and smoke partitions. Required *smoke barriers* and smoke partitions shall be maintained to prevent the passage of smoke. Openings protected with *approved* smoke barrier doors or smoke dampers shall be maintained in accordance with NFPA 105.

703.1.3 Fire walls, fire barriers and fire partitions. Required *fire walls*, *fire barriers* and *fire partitions* shall be maintained to prevent the passage of fire. Openings protected with *approved* doors or fire dampers shall be maintained in accordance with NFPA 80.

FCAC F113-16
2018 International Fire Code

- **701.6 Owner's responsibility. The owner shall maintain an inventory of all required *fire-resistance-rated and smoke resistant*** construction, and the construction included in Sections 703 through 707 and such construction shall be visually inspected by the *owner annually and properly repaired, restored or replaced where damaged, altered, breached or penetrated.*

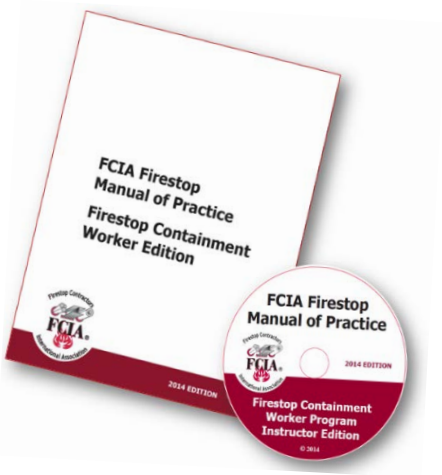
Firestopping Education

- Education & Industry Resources
  - **FCIA's Firestop Industry Manual of Practice (MOP)**
    - Contractors
    - Special Inspection Agencies
    - Others
  - FCIA MOP for Industry Influences…
    - Member Resource Document
    - FREE To Specifiers with Design Firms
    - FREE To Governmental Building, Fire Code Officials

- Published in 2000
- Updated in 2001, 2003, 2005, 2008, 2011, 2014…
  - More coming…

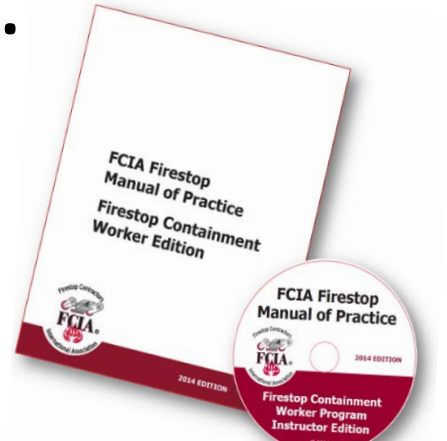
Workforce Education

- Education & Industry Resources
  - **FCIA Firestop Containment Worker Manual**
    - Industry History
    - Testing
    - Glossary
    - *22 Material & Systems Selection Chapters*
  - FSCW Manual - Inexpensive Educational Resource
    - FCIA Members - $95 each
    - 900 page book
    - E-Version PDF



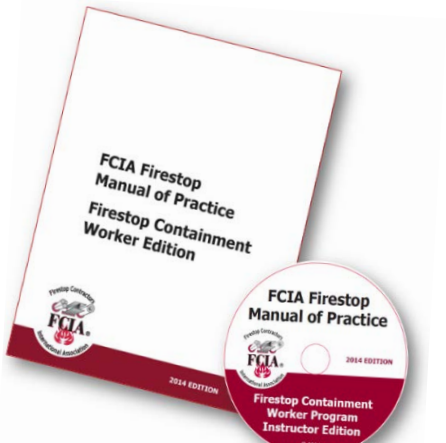
Workforce Education

- **FCIA Firestop Containment Worker Education Program – Instructor Edition – Approx. 144 hours/year**
  - **FCIA FSCW Manual Book, 'Paper & E'**
  - **Videos – 2.5 hours+ Delivered Electronically**
  - **Powerpoint Presentations – 22**
  - **22 Quizzes With/Without Answers**
  - **22 Instructor Guides**
  - **Approx. 144 hours per year, two years of material**
- **Non-FCIA Education – Approx. 288 hours.**
  - OSHA 10, 30, 50
  - Construction Math
  - General Construction Knowledge
  - Etc….



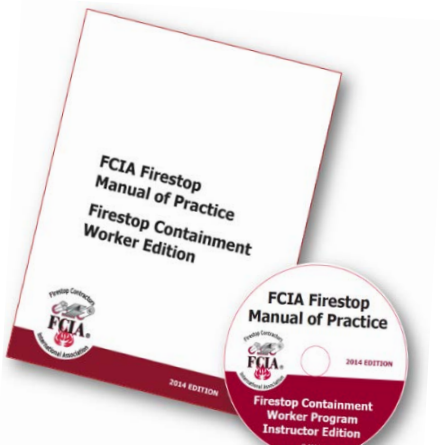
Workforce Education

- Instruction Guides – Outlines….22
  - FCIA Apprenticeship Committee Developed
  - 144 hours per year
  - 2 years of Firestop Education
  - OJT Hours



Workforce Education

- Instruction Guides – Outlines….22
  - Recommend Models for Workers…



Workforce Education

- Education & Industry Resources
  - **FCIA Firestop Containment Worker Education Program**
  - **Life Safety Digest**
  - **Firestop Articles @ FCIA.org**
  - **Audiences**
    - **Firestop Containment Workers**
    - **NEW Office Personnel**
    - **ANY Others interested in Firestopping**
    - **Purpose: Educate the Industry**

FCIA Firestop Containment Worker Chapters

- **3.0 Firestop Materials**
- 3.1 Forming, Damming, Packing Materials
- 3.2 Intumescent Latex Firestop Sealants
- 3.3 Intumescent Silicone Firestop Sealants
- 3.4 Latex Firestop Sealants
- 3.5 Silicone Elastomeric Firestop Sealants
- 3.6 Silicone Firestop RTV Foam
- 3.7 Ceramic Fiber Firestop Sealants
- 3.8 Firestop Spray Products

FCIA Firestop Containment Worker Chapters

- **3.0 Firestop Materials**
- 3.10 Field Fabricated Wrap Strips and Collars
- 3.11 Pre-Manufactured Firestop Collars
- 3.12 Pre-Manufactured Firestop Sleeves
- 3.13 Pre-Manufactured Cast in Place Firestop & Pre-Manufactured Firestop Units
- 3.14 Intumescent Composite Sheets
- 3.15 Firestop Boards

FCIA Firestop Containment Worker Chapters

- **3.0 Firestop Materials**
- 3.16 Intumescent Foam Bricks, Blocks, Plugs
- 3.17 Intumescent Pillows
- 3.18 Pre-Fabricated Intumescent MCT Electrical Firestop Devices
- 3.19 Open Path Electrical Firestop Devices
- 3.20 Mechanical Elastomeric Firestop Devices
- 3.21 Intumescent Putty

FCIA Firestop Containment Worker Chapter Content

- **Advantages**
- **Disadvantages**
- **Limitations**
- **Compatibility**
- **Storage**
- **Surface Preparation**
- **Storage Temperatures**
- **Application Temperatures & Conditions**

FCIA Firestop Containment Worker Chapter Content

- **Product Expiration / Expiry Dates**
- **Transport and Disposal**
- **Surface Preparation**
- **Installation**
- **Curing of Products, Shrinkage**
- **Self Review**
- **Tooling -**
- **Removing Tapes**

FCIA Firestop Containment Worker Chapter Content

- **Post Installation Inspection**
- **Flame Spread / Smoke Developed**
- **Sound Transmission Classes**
- **Service Temperatures**
- **Color**
- **Painting**
- **Clean Up**
- **F, T, L, W, H discussions**
- **Labeling**

FCIA Firestop Containment Worker Chapter Content

- All sections refer to:
  - **Laboratory Listing** – Tested and Listed System
  - **Manufacturers Installation Instructions**
- Laboratory Listings & Manufacturers Installation Instructions ***Required by Code***

WHY FCIA Firestop Containment Workers??

- Firestopping is a Trade – Fire Resistance
  - Technical in Nature
  - Product Usage Limitations
  - ***Systems not widely known…***
    - Available at Retail Stores?
    - ARE a 2 Year Education Program
    - Complex, with lots of detailed items
    - NOT sold with the Product
    - Dictate Suitability

Firestopping is a Trade

- Firestopping is….Continuity of …
  - Fire-Resistance
  - Assemblies Resistant to the passage of Smoke
  - Extending the Fire-Resistance Rating of the Wall or Horizontal Assembly Through:
    - Breaches
    - Openings
    - Voids
    - Gaps
    - Through or membrane continuity

Firestopping is…NOT about SEALING

- Plumbing
- Electrical
- Ductwork
- Sprinkler
- Piping
- Cabling

Firestopping is a Trade

- ***Work Result?***
  - ***Sheet Metal – Air Movement…***
  - ***Plumbing – Move things…***
  - ***Electrical – Transfer power..***
  - ***Communications – Transport data, voice***
  - ***Firestopping - Extend Fire & Smoke Resistance Continuity in and around Assemblies…***

Firestopping is a Trade

- ***"Firestopping = Not Sealing Pipes"***
- Proof FIRESTOPPING is a Specialty
  - **Specifications** – Single Source
    - MasterFormat - 07-84-00, Firestopping
    - MasterSpec, SpecLink, SpexCA – 07-84-00 = FM, UL Contractors
  - **ICC's Codes**
    - IBC Chapter 7
    - IFC Chapter 7
    - IMC, IPC refer to Chapter 7
  - **Penetration?**
    - Defined as the 'Breach'
    - Sealing the penetration??
- ***Firestopping Extends Fire Resistance through Breaches***

Firestopping is a Trade

- Proof This is a Specialty
- **O-Net & NAICS Classifications** sets benchmark for local areas to set Davis Bacon Wage Rate.
  - **Firestop O-Net Classification – 47.4099**
  - **47.4099 Construction Worker, All Others**
    - Firestop Worker under development.
    - Insulation Worker assignment is for all types of firestopping including penetrations, expansion joints, walltops, perimeter joints and other situations.
- **Firestop North American Industry Classification**
  - **(NAICS Code)** USA, Canada, Mexico
  - **238310, under Drywall and Insulation Contractors** - FIRESTOPPING
- **Prevailing Wage Determinations – O-Net**

Firestopping is a Trade

- ***Firestop Containment Worker Union Local #1***
- Washington/Oregon
  - 4 Year Journeyperson Firestop Containment Workers
  - Joint Apprenticeship Training Committee
  - Instructor
  - Students
  - Apprentices
    - 1st Year
    - 2nd Year
    - 3rd Year
    - 4th Year

Firestopping is a Trade

- Firestop Containment Worker Local #1
  - Work Assigned by Employer
  - Firestop Containment Worker CAREER
  - Respect from Other Trades
  - Firestopping, AND other Containment Work

Firestopping is a Trade

- What about other States? Provinces? Feds? Emirates?
  - FSCW Local 1 is the only FSCW Union, JATC….so far.
  - SAC States – State Apprenticeship Committees
  - BAT States – US Department of Labor
  - Canada – Ministry of Education
    - Jr. Colleges
    - Union/Non Union
  - UAE & Qatar – Not yet.

Workforce Education Matters

- Stats – Estimates – North America
  - 2000+ Firestop Contractors
  - Growing at 5-15% / Yr.
  - 10 – 20 workers each
  - 20,000 workers in North America
- Education is Essential

Effective Compartmentation is a SYSTEM

Contacts

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Workforce Education & Jurisdiction

FCIA Firestop Containment Worker Education +Program

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