18 October 2015

Sponsored by
The Abu Dhabi
Department of Municipal Affairs (DMA)
A Few Details

• Fire Exits
• Mobile Phones to Vibrate
• Toilets
• Antitrust
FCIA Anti Trust Policy

• Association Do’s and Don’ts – FCIA Outside Counsel
  – *DON’T* discuss the prices your company will charge customers.
  
  – *DON’T* discuss discounts, terms and conditions of sale, warrant terms, profits or profit margins, shares of market, bids or the intent to bid, rejection or termination, of customers, sales territories, or markets.
  
  – *DON’T* discuss administration or disciplinary action by the Association against a particular member, or enforcement of the Association’s Code of Ethics, in the absence of specific legal guidance.
  
  – *DON’T* propose or discuss any proposal, in the absence of specific legal guidance, that the Association sponsors or engage in any activity which may have the effect of producing an adverse economic impact on some competing companies.
FCIA – A Trade Association

• Total Fire Protection & Effective Compartmentation
• Codes, Testing, Products - Materials
• Firestopping for Safety – A Quality Protocol - DIIM
FCIA DIIM Educational Symposium
2015 Sponsors

Specified Technologies Inc.
The Firestop Authority

Hilti

Balco Inc.
A CSW Industrials Company

RISE & SHINE
Trading & Contracting Co. W.L.L.

Koffel Associates
Fire Protection Engineers®

Thermofire
Technology Unlimited
President’s Message
Introductions....
Name, Company, NEW, LOUD PLEASE
Welcome Remarks
Abu Dhabi
Department of Municipal Affairs

Eng. Yasmeen Sami Saadah
Director, Municipal Regulations
Abu Dhabi Dept. of Municipal Affairs
FCIA NEW Contractor Members
United Arab Emirates

- Artista Building Materials – Dubai
- Admiral AEIT - Abu Dhabi
- EMCC Co LLC – Abu Dhabi
- Chemtech Technical Services, LLC - Dubai
- Far Range Electromech. Works – Dubai
- Fischer Fixing, LLC – Dubai
FCIA’s History....

• 1997-98 – Steering Committee Meetings
  – Questions asked...
    • Why isn’t there a way for contractors to differentiate?
    • Why isn’t there inspection?
    • Why isn’t there a industry knowledge document?
    • What can FCIA do at Code Development Org’s?
  – Resulted in ....
Firestop Contractors International Association

• 1999 - First Meeting – UL’s Northbrook, IL HQ
• A NGO Trade Association
The FCIA's mission is for member organizations to be recognized throughout the construction industry as preferred quality contractors of life safety firestop systems.

FCIA Member Contractors are committed to providing consistent, high quality firestop systems as a critical part of Effective Compartmentation. Through active participation in the FCIA and related forums, members contribute to the advancement of the firestop and compartmentation industry and maintain exceptional knowledge of this specialized service.

Through this professional commitment to fire and life safety, member contractors bring considerable value to their customers by enhancing public safety and property protection.
1999 - First Meeting @ UL Northbrook, IL

– Mission resulted in ACTIONS...

– DIIM Industry Strategy Presented & Accepted & Four Committees formed
  • Accreditation – Create FM, UL/ULC Programs
  • Technical – MOP – Build Body of Knowledge
  • Liaison – Marketing – Get Connected
  • Code – Get active!
What did we do?
What are we doing?

• Promote FCIA Industry Strategy = DIIM
  – Advocate for DIIM
  – Education for Members
  – Exposure for Members
  – Networking Everywhere
  – Support Members
Accreditation
FM 4991 & UL-ULC QFC 2015

• FM & UL Meetings
• Educated UL QFC Auditors
• FM 4991-FM Data Sheets
• FM & UL Firestop Exams
  – Clark County, Phoenix SI’s
  – NY, WA/OR, etc.
Technical, Education, Apprenticeship

• MOP & Firestop Containment Worker Education
    • Ch. 3 - 50 to 525 pgs.
    • Ch. 1, 2, Appendices, Standard Answers,
    • Firestop Containment Worker Manual
    • MOP Inspection Chapter
Technical, Education, Apprenticeship

• MOP & Firestop Containment Worker Education
  – FCIA MOP Firestop Containment Worker Manual
  – FCIA Firestop Containment Worker Education Instructor Edition Manual Plus....
    • 22 Powerpoint Presentations with Speaker Notes
      – 5 more PPT’s
    • 22 Instruction Guides, Quizzes
    • Step by Step Video
    • $1495US mbr., $4995US Non member...
Code Committee
ICC, NFPA & IAPMO Code Development

• ICC Code Development
  • Fire Safety Committee – Bill McHugh
  • Install to listing system and manufacturers instructions

• NFPA 5000/101 /1
  • July 30, Milwaukee
  • Added Barrier Marking
  • Fire Resistance Primary
Standards Committee

• Standards Committee Meetings...
  • ASTM E 2174, E 2393
  • ASTM October – Tampa, FL, USA
  • IAS Board of Directors
FCIA DIIM Symposium
Abu Dhabi, UAE
– IAS AC 291 Special Inspection Agencies
  – Voluntary Program
  – AHJ can ‘Approve Agency’
  – In MasterSpec & SpecLink – 2 years...
– Management System Audit
– FM or UL Firestop Exam Required plus experience
Inspection Agency Accreditation

Special Inspection Agency - IAS AC 291 - Firestopping - Special Inspection Agency Accreditation for Firestop System Inspection Companies

FCIA has invested resources in the proper "DIIM" - Design, Installation, Inspection and Maintenance/Management of Firestopping.

In addition to a FCIA Member Specialty Firestop Contractor or FM 4991 Approved and/or UL/ULC Qualified Contractor, Special Inspection of installed Firestop Systems by an AHJ 'Approved' Special Inspection Agency Company that employs AHJ 'Approved' Special Inspectors is needed to verify that the Contractor's Quality Management System is working.

Learn more about what is required by the International Building Code, Chapter 17 for Firestop and other Special Inspection.

FCIA Member, IAS Accredited Firestop Inspection Firms

**Butler Engineering (ME)**
Sajid Raza, IAS AC291 Accredited

**Katz Engineering**
Yuri Katz, P.E., IAS AC291 Accredited

**Sound Fire & Life Safety Inspection Services, LLC**
Tom Smith

**Thomas Bell-Wright International Consultants**
Tom Bell-Wright

**Walter T. Gorman P.E., P.C.**
Audrey Quimby, IAS AC291 Accredited

**Dubai**
971 (4) 39 22 001

**New York**
(212) 244-7070

**NY**

**Auburn**
(206) 621-1686

**WA**

**Dubai**
+971-04-333-2692

**New York**
(212) 532-5970

NY
Marketing Committee

• Trade Shows & Speaking
  – FCIA Abu Dhabi, Dubai, UAE Symposiaums
  – FCIA Doha, Qatar, Symposiaums
  – GCC Fire Safe Congress Abu Dhabi, UAE - (March)
  – Fire Safe Oman – Muscat, Oman
  – Barrier Management Symposiaums – 2016
    • ASHE, TJC, UL, FCIA
  – ASHE Annual Convention BMS Summary
  – ICC Expos
  – Construction Spec. Institute/CONSTRUCT
  – Construction Specifications Canada
  – Royal Architects Institute of Canada
  – NFPA Expo
  – Campus Fire Safety Forum
Marketing Committee
Outreach & Relationships

• FCIA Webinars –
  – Over 150 sites
  – Reach about 450/session
  – About 4,000+ per year.
FCIA Membership

• Member Retention 90%, 331 Members
• Involvement...Relationships...Outreach
• Qatar, UAE, USA, Canada Symposiums
Program Committee
Plans Conferences

• 2015 - FCIA Firestop Industry Conference
  – Talking Stick Resort, Scottsdale
Thanks...FCIA 2015 Committees

• Industry Relationships
  – ICC, IAS, ASHE, TJC NFPA, CSI, CSC, more...
• Financially Sound Association
• Great Board, Committees, Volunteers
• Membership Retention @ 90%+
• Record Year – 331 Members
• North America & International Presence
Thanks...FCIA 2015 Board
Welcome Remarks
Abu Dhabi
Department of Municipal Affairs

Eng. Yasmeen Sami Saadah
Director, Municipal Regulations,
Abu Dhabi Dept. of Municipal Affairs
FCIA ADIBC
FIRE & SMOKE PROTECTION
SYMPOSIUM

18 October 2015

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FCIA Education for FM & UL Firestop Exams
19-20 October 2015

The Beach Rotana
10th Street, Al Zahiya Area
Abu Dhabi, UAE
FCIA DIIM Educational Symposium
Abu Dhabi, UAE

Mr. Bill Koffel
Koffel Associates
FCIA Education and Committee Action Conference

Break
FCIA DIIM Educational Symposium
Abu Dhabi, UAE

Mr. Tony Abou-Rjeily
Specified Technologies, Inc.
FCIA DIIM Educational Symposium
Abu Dhabi, UAE

Break
Effective Compartmentation & Continuity

New UL test standards for Life Safety Dampers will take effect in July 2002
Firestopping for Continuity

- Firestop Products Become Firestop Systems --
  - “A Specific field erected construction, consisting of an assemblage of materials to prevent the spread of fire through openings in fire rated walls and floors using ASTM E 814 / UL 1479 / **FM 4990**, ULC-S-115, UL 2079, **E-2307** as the test method...”
  - Testing = Suitability statement for use of a firestop product in a specific **system** application
Firestopping for Continuity
D – Listed Systems – Standards
Firestopping for Continuity  Firestop Products

- Sealants
  - Silicone, Latex, Intumescent
- Wrap Strips
  - “Thick, Thin, Wide, Less Wide”
- Putties
- Pillows
- Composite Sheets
- Bricks / Plugs
- Pre Fabricated Kits
- Mortar
- Spray Products

Graphics, STI, 3M, AD, HILTI, Nelson
DI – Design & Installation
SYSTEMS SELECTION
SYSTEMS ANALYSIS
Who’s Responsible, How to Choose???

Graphics – STI
Firestopping for Continuity

• Products become SYSTEMS After...
• ‘Field Erected Construction...
  – F Rating - Flame
  – T Rating – Temperature
  – H Rating – Hose
  – L Rating – Smoke
  – W Rating – Water

Graphics – 3M
Products become Systems
Hose Stream = Shock Test
Firestopping for Continuity Products become Systems

- Firestop Systems Directories –
  - UL
  - Intertek
  - FM Approvals

*Systems Selection & Analysis...Not as easy as it looks...*
Engineering Judgments/EFRRRA

• 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 – “EFRRRA”

– Based on engineering, IFC Protocol
Details...
Firestop Joint Systems Definition –

• UL 2079, ASTM E 1966, ULC-S-115
  – “A joint system is a **specific construction** consisting of adjacent **wall and floor assemblies**, and the materials designed to prevent the spread of fire through a linear opening between the wall and / or floor assemblies”
Firestopping for Safety

- **Firestop Joint Systems Definition – UL 2079**
  - Min. Positive Pressure – .01 Water, 12” below assy.
  - Movement Cycling
    - Class I – min. 500 cycles, min. 1 cycle / minute
    - Class II- min. 500 cycles, min. 10 cycles / minute
    - Class III-min 100 cycles, min. 30 cycles / minute
  - Fire Tested at Maximum Joint Width
  - No Load Bearing Characteristics, unless noted
  - Assembly, L or W Ratings
Gypsum Wall assembly running up to concrete over metal deck

UL/cUL SYSTEM NO. HWD-0042
TOP OF WALL JOINT: 1 HR. OR 2 HR. GYPSUM WALL ASSEMBLY
ASSEMBLY RATING = 1 HR. OR 2 HR. (DEPENDING ON RATING OF WALL AND FLOOR ASSEMBLY)
CLASS II MOVEMENT CAPABILITIES - 50% COMPRESSION OR EXTENSION

HILTI Photos

Fire Stop Technologies, Inc.
Joints

Head of Wall
Joints

I-Beam to Fluted Deck
Firestop Perimeter Systems

Definition – ASTM E 2307

“A Perimeter Fire Containment System is a specific field erected construction consisting of a floor with a fire resistance rating, and an exterior curtainwall with no hourly resistance rating, and the fill material installed between the floor and the curtain wall to prevent the vertical spread of fire in a building.”
Tamweel Towers, Dubai
**Tamweel - A discarded cigarette Torch? Sharjah, UAE?**
Proper Installation of Mineral Wool

- Compressed mineral wool must be inserted perpendicular to the joint to allow for movement between the slab and wall.

Wrong!

Correct
Firestop Products Become Systems when Installed to SYSTEM
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, Qualified*
Firestop Contractor Qualifications
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
Initial FM, UL 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
Annual Audit
FM 4991 UL / ULC
Contractor Company Personnel

- 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 4991 Contractor

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
Wednesday, February 10, 2010

Mr. Randy Perry
Adler Firestopping Ltd.
#23, 53016 Hwy 60
Acheson, AB T7T 1M9
Canada

Re: Qualified Firestop Contractor

As the firestop manufacturer with more UL and ULC Classified Firestop System Coverage than any other, we are intimately familiar with UL and ULC’s QFC Program. We recognize the program as one of two best-in-class, third-party, quality assurance methods available to building project decision-makers to help ensure applicator quality. As such, we fully endorse the program and those applicators that have invested heavily to earn their way to become a member in this elite group of professionals.

It is our understanding that Adler Firestopping Ltd. is a UL (Underwriters Laboratories of Canada) Qualified Firestop Contractor (QFC) in good standing. This can be verified at the bottom of the page on the following link:


Moreover, Randy Perry has successfully attended our intensive, two-day FT Level II program, taken the exam, earned a passing score and is within the two-year expiry period before renewal will be required. A copy of his certificate can be made available upon request.

Regards,

John Hurley
Regional Manager, Western US and Canada
FCIA DIIM Educational Symposium
Abu Dhabi, UAE

Break
FCIA DIIM Educational Symposium
Abu Dhabi, UAE
Inspection
Mr. Abhishek Chhabra
Thomas Bell-Wright Consulting

Mr. Sajid Raza
Butler Engineering
FCIA DIIM Educational Symposium
Abu Dhabi, UAE

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Maintenance
Mr. Bill McHugh, FCIA
Build Right
Maintain / Manage CONSTANTLY

New UL test standards for Life Safety Dampers will take effect in July 2002
07-84-00 Specifications – DIIM Process
Build Right

MasterFormat - 07 84 00 - Firestopping

• Part I & 2 –
  – FCIA Member, FM 4991 Approved or UL Qualified Firestop Installer/Contractor - Valid DRI, Test Standards – IAS AC 291
  – F, T, L, W Ratings
  – Physical Properties - Building Requirements –
    • Chemical
    • Biological, Germ
    • Radiation
    • Explosion
    • Pressure

SPEC FREE AT www.FCIA.org, Specification
07-84-00 Specifications – DIIM Process
Build Right

MasterFormat - 07 84 00 – Firestopping

- Part II – Products – Testing, Properties for FIRESTOPPING
  - Continuity for Fire Resistance – Wall, Floor Fire Ratings
  - Pipes, cables, ducts, cable trays, MEP&C Systems -
  - Fire Resistance Rated Joints –
    - Head of Wall, Wall to Wall, Wall to Floor
  - Perimeter Fire Containment Joints
    - Floor Slab edge/Exterior Wall

SPEC FREE AT www.FCIA.org, Specification
07-84-00 Specifications – DIIM Process Build Right

MasterFormat - 07 84 00 – Firestopping

• Part III, Execution, Quality Assurance (DIV 1 Reference)
  – ASTM E 2174 & ASTM E 2393 Inspection
  – IAS AC 291 Special Inspection Agency Qualifications–
    • Individual on staff passed FM or UL Firestop Exam

SPEC FREE AT www.FCIA.org, Specification
07-84-00 Specifications
Build Right

• **Systems Testing – Part 1 – DIIM References**
  – Penetrations - ASTM E 814 & UL 1479,
  – Joints - ASTM E 1966, UL 2079, S115 -
  – Perimeter - ASTM E 2307 –
  – FM 4991 Standard for the Approval of Firestop Contractors
  – UL Qualified Firestop Contractor Program
  – ASTM E 2174 & ASTM E 2393 - Inspections
  – IAS AC 291 Accredited Special Inspection Agency
07-84-00 Specifications
Build Right

• Single Source Product??
• YES, BUT.....
  – ‘...to the greatest extent possible.’
  – Number of Systems v. EJ’s
  – IFC Protocol for EJ’s
    • No EJ if Tested/Listed System Available
  – Single Source Contractor
    • FCIA Member, and
    • FM 4991 Approved, and/or
    • UL Qualified
M – Maintenance (& Management) CONTINUOUS
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]
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]
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.
Chapter 1, SECTION 21
Firestopping

21.15.2 The required fire resistance rating of installed firestop systems shall be visually inspected by the owner or owner’s inspection agency annually. Damaged, altered or breached firestop systems shall be properly repaired, restored or replaced to comply with applicable codes as per the guidelines of Civil Defence.

21.15.3 Any new Openings made therein for the passage of through penetrants, shall be protected with approved firestop system to comply with applicable codes as per the guidelines of Civil defense.
National Fire Code of Canada

National Fire Code of Canada

• Division B – Part 2, Building and Occupant Fire Safety
  2.2.1.2 – Damage to Fire Separations – where fire separations are damaged so as to affect their integrity, they shall be repaired so that the integrity of the fire separation is maintained...

• FCIA Manual of Practice – Appendix, Maintenance
  FCIA recommends Barrier Management for Effective Compartmentation and Structural Protection

*Includes Fire Dampers, Fire Doors...and Continuous Continuity*
“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
Proper ‘DCIIM’ Means Reliable Systems...

- **Properly Designed** - A/E - Consultant
  - Tested and Listed Systems, FCIA Member Mfr’s., Compartments per IBC, NFPA Codes, SUBMITTALS... *Specified (CCS, CDT, RSW)*

- **Properly Coordinated & Installed**
  - FCIA Member, FM 4991, or UL Qualified Contractors

- **Properly Inspected**
  - ASTM E 2174 & ASTM E 2393, by IAS Qualified Inspectors at IAS AC 291 Accredited Inspection Firms

- **Properly Maintained & Managed** –
  - FCIA Member, FM 4991, or UL Qualified, IAS Accredited Firms
Effective Compartmentation is a SYSTEM - DIIM

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Inspection & Code Requirements
I – Inspection
Systems Analysis
QUALITY PROCESS

Design

INSPECTION

INSTALLATION

MAINTENANCE
Firestop Installation & Inspection

- ASTM E 2174/ ASTM E 2393 – "Inspection Process"
I – Inspection –
Code Requirements

[A] 110.3 AD IBC Required inspections. The building official, upon notification, shall make the inspections set forth in Sections 110.3.1 through 110.3.10.

[A] 110.3.8 AD IBC Fire- and smoke-resistant penetrations. Protection of joints and penetrations in fire-resistance rated assemblies, smoke barriers and smoke partitions shall not be concealed from view until inspected and approved.
I – Inspection –
Code Requirements

AD IBC 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

ADIBC 1704.17 Through-penetration firestop systems, concealed draftstop and fireblock systems. All through-penetration firestopping, draftstopping and fireblocking shall be subject to periodic special inspection prior to concealment to determine compliance with the approved construction documents. ... more.
I – Inspection –
Code Requirements

AD IBC 1704.17 , Cont’d.
Listed systems shall be inspected for compliance with their listing.

Exception: Through-penetration firestop systems may be inspected in accordance with ASTM E 2174-04 when authorized by the registered design professional of record and when the contractor applies the procedures established in that standard.
Firestop Systems Inspection
ASTM E 2174 - ASTM E 2393

• “Standard Practice for On-Site Inspection of Installed Fire Stops – Penetrations - Joints”
  – Standard Inspection Procedure
  – Special Inspection Agency Companies
  – Other Qualified Firms
  – Report to Building Owner, Fire Marshals & Code Officials
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

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

• Inspector Firm & Inspectors
  – ‘Independent of, and Divested from’ Installing firm, Distributor, Manufacturer, Competitor, Supplier...
  – ‘Not a Competitor’ of the Installer, contractor, manufacturer, or supplier ....
  – Submit notarized statements of ...
Firm and Individual Qualifications
IAS AC 291

• Specify IAS AC 291 –
  – Quantified Qualifications
  – Helps AHJ with “Approved Agency”
  – Not in ASTM Standards, Code

• Specify Individual Certifications
  – 3rd Party, Independent Exams verify Knowledge
    • FM Firestop Exam
    • UL Firestop Exam
Inspection Methods
ASTM E 2174 - ASTM E 2393

• During Construction
  – Random witness, Each Floor
    • 10%, each type of Penetration Firestop,
    • 5% of Total Lineal Feet of Fire Resistance Rated Joint System, each type
Inspection Methods
ASTM E 2174 - ASTM E 2393

• Post Construction - Destructive Testing
  – Minimum 2% , no less than 1, each type per 10,000 SF of floor area
  – Minimum 1 / 500 LF of Joint Area, mandatory
  – If 10% variance per firestop type
    – Inspection stops
    – Installer inspects, repairs
    – Inspector reinspects
Inspection Methods
ASTM E 2174 - ASTM E 2393

• Variances....
  – ASTM E 2174 & ASTM E 2393
    • One Day Notice after discovery to Contractor
  – International Building Code 1704.2.4
    • ‘Brought to IMMEDIATE attention of contractor’
    • ‘If not corrected, Building Official AND RDP... prior to completion of that phase’
1704.1.2 Report requirement. Special inspectors shall keep records of inspections. The special inspector shall furnish inspection reports to the building official, and to the registered design professional in responsible charge. Reports shall indicate that work inspected was or was not completed in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report documenting required special inspections and correction of any discrepancies noted in the inspections shall be submitted at a point in time agreed upon prior to the start of work by the applicant and the building official.
Inspection Final Report
ASTM E 2174 - ASTM E 2393

• Name, address, location – project, installer, inspector
• Type and quantity of firestops inspected
• Verification method
• Percentage Deviation
• Copies of all documents sent to Authorizing Agency
Contractor Closeout Documents

- Copies of all documents sent to Authorizing Agency
- Product Data Sheets
- ‘SYSTEMS’, Fire Rated Assemblies = As Built
- Inspection Docs
- Warranty Docs
- Maintenance Requirements
- Letters of Compliance
- FCIA Member in Good Standing Certificate
Firestopping & Compartmentation for Safety
FCIA DIIM Educational Symposium
Abu Dhabi, UAE

Inspection
FCIA NEW Members
UAE

Contractors
• Admiral AEIET - Abu Dhabi
• CHEMTECH - Dubai
• Far Range Electromechanical Works - Dubai

Manufacturer
• Fischer Fixing LLC – Dubai