The FCIA Standards Report

- *FCIA Standards Committee Extended Report*
  - Eric Keeton & Randy Bosscawen
The FCIA Standards Report

• Standards Committee – Eric Keeton
  – FCIA Active to Bring Field Voice to Standards Development Process

  – ASTM - ‘Consensus Standards’
    • E 06 – Performance of Buildings – Meets 2x yearly
      – ASTM E 2174, ASTM E 2393, ASTM E 814
    • E 05 – Fire Standards – Meets 2x Yearly
      – ASTM E 814
    • Personnel Certification – Installers and Inspectors
      – ASSE 9000 Series - Installer and Inspectors
    – UL STP, ULC STP – Standards Technical Panels – Meets as needed
      • Movement, Shrinkage, Exposure, Aging, others...
The FCIA Standards Report

• ASTM E06 Performance of Buildings
  – ASTM E 2174/2393 Inspection Standards
    • FCIA Chairs Task Group
    • FCIA Balloted 65 items preparing for ICC Codes
    • Published 2004 – Ballot = 2009, 2010
    • Currently addressing language issues within 2174/2393
    • Current Issues – Product Characteristics
      – Shrinkage
      – Movement
      – Exposure
    • Product Data Sheets vs. Standard
The FCIA Standards Report

• **ASTM E06 “Performance” of firestop…**
  – Aging, Exposure, Movement, Shrinkage?
    • Aging – “Scrapped, Staring Over”, after 8 years.
    • Movement – No Action, UL STP had some movement, inactive
      – FCIA Letter from Structural Engineer
    • Exposure – Standard Exists, changed from Extreme to ‘Exposure’
      – FCIA Abstained with Comment – ‘must represent conditions expected’
The FCIA Standards Report

- **ASTM E06 Performance of Buildings**
  - **ASTM Design & Installation Guide**
    - International Firestop Council Initiative
    - Similar to ASTM C1193 – Standard Guide for use of Joint Sealants
    - Discuss Design for ‘Where no Standards Exist’
      - Movement, Shrinkage, Aging, Exposure
    - General Informational Guide explaining Suitability for use of products in specific applications
      - Architects, Engineers, Contractors, AHJ’s
      - To be put in code
    - Independent Consultant writing long Document on Firestopping industry
      - History, Standards, Materials, etc.
The FCIA Standards Report

- **ASTM E06 Performance of Buildings**
  - *ASTM Design & Installation Guide*
  - *FCIA Position*
    - **Focus on Meaningful Standards First**
      - Aging, Movement, Shrinkage, Exposure
    - **Discuss Exceptions Later**
    - **ASTM Should Create a Short & Long Range Standards Development Plan**
    - **Don’t Build another Manual of Practice**
      - *FCIA MOP developed under a Consensus Process*
The FCIA Standards Report

• **ASTM E05 Fire Standards**
  – *Participate in Fire Standards Development*
  – *Reviewing ASTM E 814*
    “...Testing must reflect what can be reasonably expected to occur in the field”
The FCIA Standards Report

– Reviewing ASTM E 814

“...Testing must reflect what can be reasonably expected to occur in the field”

X1.4.2 Through-penetrating items, as contemplated by this test method, generally represent a small portion of a much larger mechanical, electrical, or similar system. Since this test method is intended to focus on the performance of firestops, standard support and capping provisions are defined for through-penetrating items. Users are cautioned that these standard support and capping provisions are not necessarily representative of field installations nor do they represent worst-case conditions. At the scale contemplated by this test method, it is not feasible to simulate or evaluate all of the
The FCIA Standards Report

- **Reviewing ASTM E 814**
  
  “...Testing must reflect what can be reasonably expected to occur in the field”

1.6 This test method does not apply to membrane penetrations of load-bearing walls.

“ASTM E 2174 Heard in “Structural Section” of Code Hearings”
The FCIA Standards Report

– Reviewing ASTM E 814

1.8 This standard is used to measure and describe the response of materials, products, or assemblies to heat and flame under controlled conditions, but does not by itself incorporate all factors required for fire-hazard or fire-risk assessment of materials, products, or assemblies under actual fire conditions.
The FCIA Standards Report

- FCIA Participating...some success.
  - American Society of Sanitary Engineers Series 9000 – Installers, Inspectors
    - 4 Years Experience in installation of Piping
    - 4 Year Firestop/Containment Worker
    - 4 Year Mechanical Insulator
    - Plus training, pass exam
    - Plus OSHA 10
    - Exception: New workers...supervised by...
The FCIA Standards Report

- **ASTM E06 Performance of Buildings**
  - **ASTM Personnel Certifications – Installers, Inspectors**
    - **FCIA Initiative**
    - **Certification Criteria**
    - **ALL FIRESTOPPING - NOT JUST PLUMBING**
    - **Technical Advisory Committee Appointed – 8 members**
      - Contractors
      - Building Officials
      - Manufacturers
      - Firestop Consultants
      - Industry Consultants

- **ASTM Inspector Credentials...**
The FCIA Standards Report

• ASTM E06 Performance of Buildings Committee
  – ASTM “Performance” of firestop materials
  – Aging – Task Group Meeting 11-1-11
    • Erroneous Plot Data
    • Other Age Estimating Methods – Heat, etc.
  – All study ‘scrapped’
    • Start over...
    • Explain in Guide?
    • Retained Actual Aged in Place??
FCIA Committee Reports 2011 Standards Committee

• ASTME06 Performance of Buildings Committee
  – ASTM “Performance” of firestop materials
  – Exposure
    • Passed in 2011
    • Salt Spray, Water...
    • Radiation?
    • Cleaning Chemicals?
    • Temperature?
FCIA Committee Reports 2011 Standards Committee

• ASTM E06 Performance of Buildings Committee
  – ASTM “Performance” of firestop materials”
  – Movement
    • FCIA Letter from Structural Engineer to IFC – 2009
    • UL STP, ASTM Discussions
      – Manufacturers
      – Testing Laboratories
      – More to come...
    – Water hammer, thermal expansion, initial set of plumbing system, pipe ‘walking’
The FCIA Standards Report

• Standards - UL 1479 / 2079 – (STP)
  Standards Technical Panel

  – UL STP Study Groups - Movement, Shrinkage, Aging
  – FCIA UL STP Meetings
    • At FCIA – April, November 2009, April, 2010, November 2011
    • At UL – January 2011
    • UL Letter – Optional testing for shrinkage, ASTM C 1241

  – FCIA Requested New Study Groups
    • ULC – Shrinkage, Movement, Exposure
The FCIA Standards Report

• **UL STP Study Groups - Shrinkage**

• Shrinkage - ASTM C 1241
  – 1/8” Wide x 1-1/2” Long Sample
  – 70-72F @ 50% Relative Humidity
  – 28 Days
  – Measurements Taken Prior, After = Shrinkage Value

– FCIA Requested Study Groups
  • ULC – Shrinkage, Movement, Exposure
FCIA Committee Reports 2011 Standards Committee

- **ASTM/UL STP - Shrinkage?**
  - *Latex Sealants – Intumescent Latex Sealants*
  - *Shrinkage not on Product Data Sheets*
  - *UL, FM, Intertek Systems – Minimum X” thickness*
  - *Age Material in Actual Field Conditions*
  - *Product Thickness becomes less than Minimum X”*
  - *= Failed Inspections*
FCIA Committee Reports 2011 Standards Committee

- **ASTM/UL STP - Shrinkage?**
  - *Latex Sealants – Intumescent Latex Sealants*
  - *Shrinkage Values – Possible Solutions*
    - Percent Solids By Weight/Mass or Volume
    - Advantages
    - Disadvantages
FCIA Committee Reports 2011 Standards Committee

• **ASTM/UL STP - Shrinkage?**
  – *Latex Sealants – Intumescent Latex Sealants*
  – **Future Study**
    • *Destructive Testing Measurement Methods*
    • *Curing @ 100F, 75% RH...other Conditions?*
    • *Shrinkage listed on Tested and Listed System?*
FCIA Committee Reports 2011 Standards Committee

- **ASTM E06 Performance of Buildings Committee**
  - *ASTM “Performance” of firestop materials“*
  - *Aging, Exposure, Movement, Shrinkage?*
  - *Which one is higher priority??*
  - *FCIA = ALL are Equal”*
FCIA Committee Reports 2011 Standards Committee

• Questions?