FIRESTOPPING

The Hidden Solution that Compartmentalizes

Vic Wootton

A/T Firestop and Fireproofing Solutions

Firestop

What is Firestop
Where Required
Why Important
Who Installs
Type of Products
How to Install

A/T Firestop and Fireproofing SOLUTIONS Inc.

PERSONAL PROFILE:

Victor Wootton

- 5 years with A/D Fire Protection Systems
  - Manufacture rep and Product Manager
- 10 years managing A/T Firestop

A/T Firestop and Fireproofing SOLUTIONS Inc.

COMPANY PROFILE

- Specialty Firestop Contractor
- Over 15 years Experience
- In Process of becoming ULC Accredited

What is Firestop?

- A **firestop,** is a fire protection system made of various components used to seal openings and joints in fire-resistance rated wall and/or floor assemblies.

Compartmentalize

- This hotel has fire rated walls and floors
- Maintain Fire Separations
- Each unit is firestopped to contain the fire (and smoke) from spreading

Definitions

- **Rating** criteria are derived from the standard CAN/ULC-S115.
- **Intumescent** is a substance which swells as a result of heat exposure, thus increasing in volume
- **NBCC Ratings**:
  - F (Fire) Ratings are the standard ratings required by the NBCC for the vast majority of situations
  - FT (Transmission of Heat) Ratings are required at firewalls and at floors above basements.

Definitions

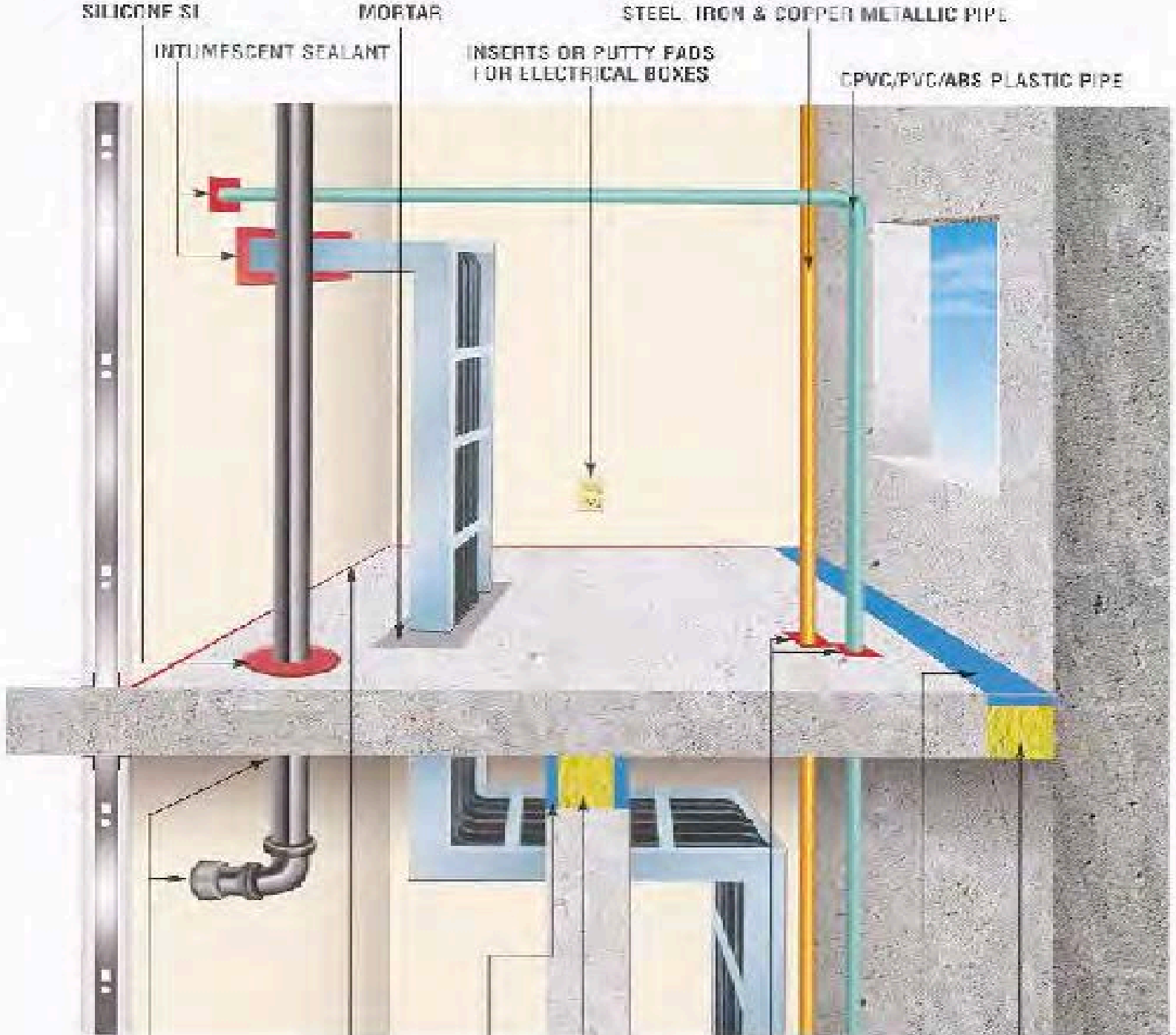
- **Annular Space -** the opening around the penetrating item.
- **Penetrating item** – building services; cables, cable trays, conduits, ducts, etc. that pass through a F.R. wall or floor.
- **Firestop System** – Firestop material tested in specific assembly

Where is Firestop Required?

- **All** new construction & retrofit projects.
- Industrial, Institutional & Commercial
  - Apartment Buildings
  - Hospitals
  - Schools
  - Nursing Homes
  - Office Buildings

Where is Firestop Required?

- Where fire rated assemblies are being penetrated
  - Fire Command Centers
  - Stairwells
  - Mechanical rooms
  - I.T. Rooms
  - Etc.


SILICONE SI
MORTAR
STEEL, IRON & COPPER METALLIC PIPE
INTUMESCENT SEALANT
INSERTS OR PUTTY PADS
FOR ELECTRICAL BOXES
CPVC/PVC/ABS PLASTIC PIPE

Why is Firestop Important?

- Life Safety
- Building Code Requirement
  - Occupancy
- Liability
- Water Seal
- Limit Losses
  - Production

Who Installs Firetop?

- Specialty Firestop Contractors
- Trades
  - Drywall
  - I.T.
  - Plumber
  - Electrician
  - Mason
  - Etc.

Firestop Products

- Mineral Wool
- Intumescent Sealant
- Silicone
- Silicone SL
- Acrylic Sealant
- Spray
- Mortar
- Foam
- Collars
- Wrap Strip
- Putty Pads
- Inserts
- Putty
- Pillows/Blocks
- Sleeves
- Composite Sheets

Mineral Wool

- Firestop Backer
- Rock Fiber
- Pre-cut to required width & depth
- Size:
  - 2” wide X 4” deep X 48” long
  - 3” wide X 4” deep X 48” long
  - 4” wide X 4” deep X 48” long

Intumescent Sealant

- Premium Sealant
- Expand with heat
- Listed in majority of Tested Systems
  - Cables
  - Small Plastic Pipes

Silicone (non-sag and self- leveling)

- Water resistant
- Usable at any temperature

SILICONE (self-leveling)

Acrylic Sealant

- Water Based
- Economical

Firestop Spray

- Fast
- Less Material
- Economical

Mortar

- Light Weight
- Large Openings

Large Opening Solution

Can remedy an opening as big as <u>24 sq. ft.</u> in one day

Collar

- Device for Plastic Pipes
- Expand to close melting pipe

WRAP STRIP

- Plastic Pipes (Similar to Collars)
- Make Collars on Site
- Economical
- One Size

Putty Pads

- Installed around back of electrical box
- Allows for closer placement of boxes in Fire Separations

Inserts

- Installed inside at back of electrical box
- Allows for closer placement of boxes in Fire Separations
- Ideal for retrofit where back of box is not accessible

PUTTY

- For Moderate Active Openings
- Stays pliable
- Reusable
- No sealant required

Pillows

- For Active Openings
- Reusable
- No sealant required

How to Install Material

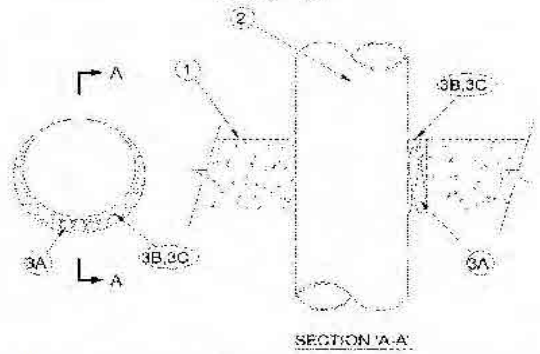
- Select Systems that are Project Specific (submittal)
  - What is the rating required?
  - What is penetrating floor or wall?
  - What is floor or wall made of?
  - What is the Annular Space?

- 2 hour rated concrete floor
- 2” Copper pipe penetration
- 0” to 1” Annular Space

cUL Fire Test Design No. C-AJ-1497

UL System No. C-AJ-1497

November 19, 2003
F Rating — 3 Hr
T Rating — 0 Hr



SECTION 'A-A'

1. **Floor or Wall Assembly** — Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Floor may also be constructed of any min 6 in. thick hollow-core **Precast Concrete Units***. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 1-1/8 in. larger than diam of through-penetrant (Item 2). Max diam of opening in floors constructed of hollow-core precast concrete units is 7 in.

See **Concrete Blocks** (CAZT) or **Precast Concrete Units** (CFTV) categories in the Fire Resistance Directory for names of manufacturers.

2. **Through-Penetrant** — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The annular space shall be min 0 in. (point contact) to max 1-1/8 in.. The following types and sizes of pipes, conduits or tubing may be used:

A. **Steel Pipe** — Nom 24 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 24 in. diam (or smaller) cast or ductile iron pipe.

C. **Conduit** — Nom 6 in. diam (or smaller) steel electrical metallic tubing or steel conduit (EMT).

D. **Copper Pipe or Tubing** — Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.

Thank you

Questions?