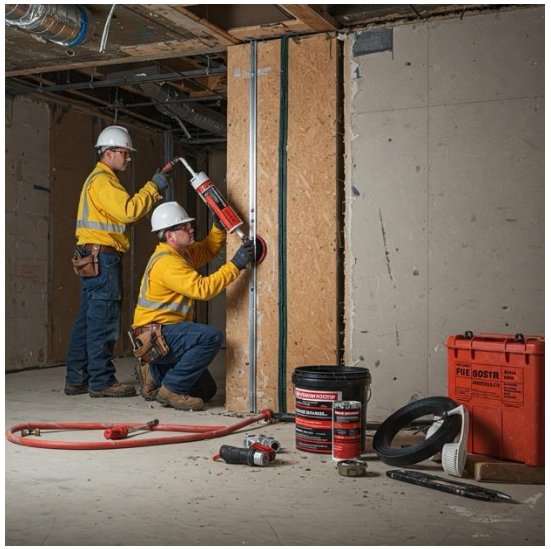
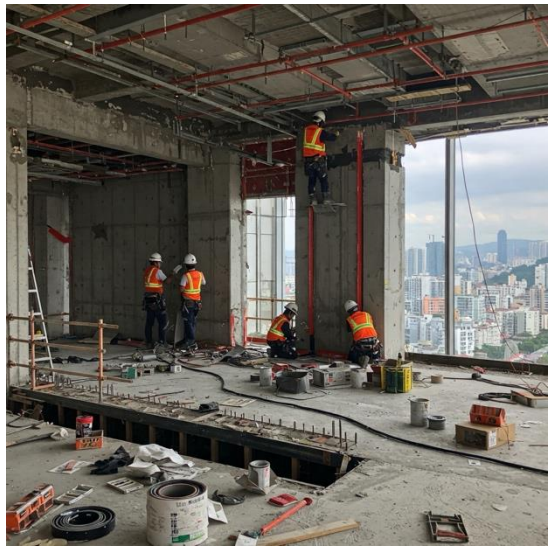
FIRE AUSTRALIA2025

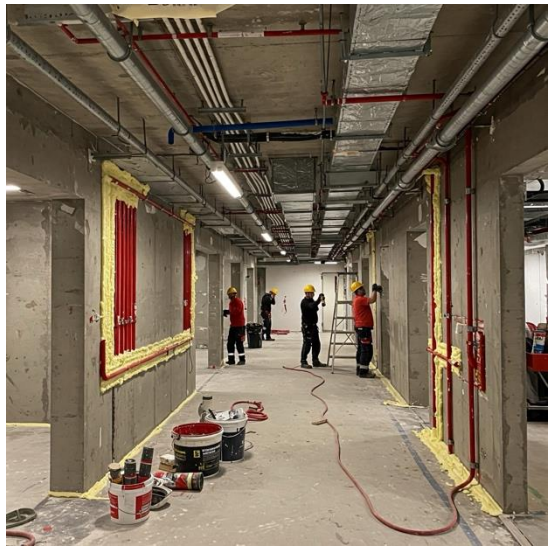
The Global Language of Firestopping

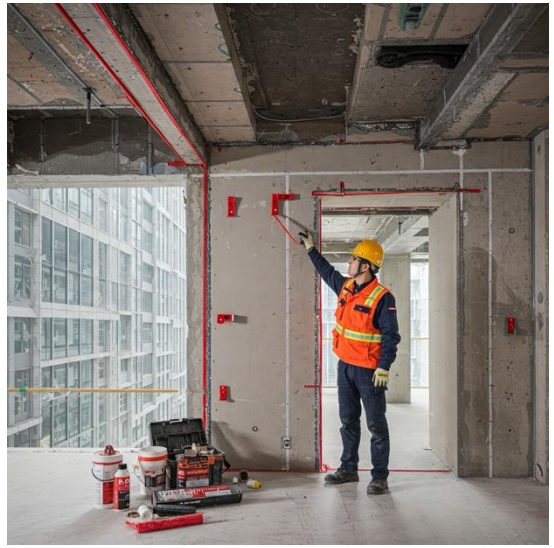
Abhishek Chhabra

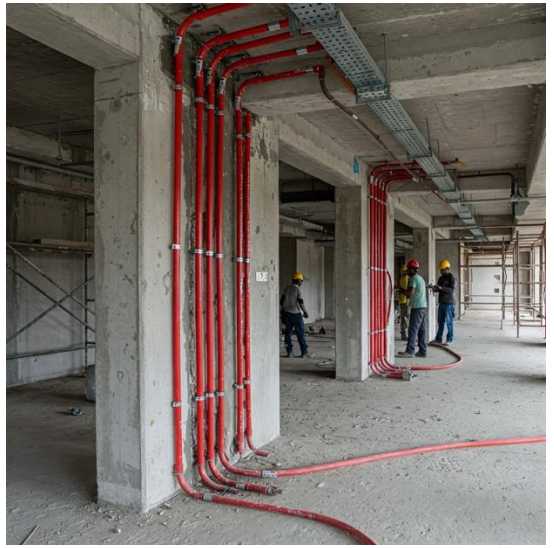
Director International Initiatives, Firestop Contractors International Association (FCIA)





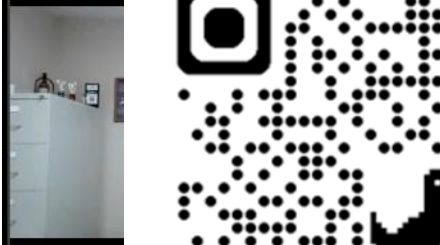






13-15 May 2025 International Convention Centre, Sydney fireaustralia.com.au

FIRE AUSTRALIA2025



Key points: Insulation criteria

Region/Standard	Temperature Limits (Unexposed Side)	Where Temperature is Measured	Excursion Rules	Key Differences from U.S.
U.S. (ASTM E119, UL 1479, UL 2079, ASTM E2307)	Average: ≤139°C (282 F) Max: ≤181°C (357.8 F)	Unexposed side 5–9 thermocouples, spaced evenly per standard guidelines (e.g., ASTM E119 Section 7.3).	Brief excursions above 181°C allowed if average stays below 139°C.	
UK	Average: ≤140°C (284 F) Max: ≤180°C (356 F)	Unexposed side 5–9, placed per BS 476-20 Appendix D (e.g., 100 mm from edges, evenly distributed).	**Excursions above 180°C not allowed;** **any point** exceeding 180°C	1°C (33 .8 F) difference in limits; **stricter excursion rules.**
		Unexposed side, EN 1363-1 Sectio from edges, 1 the		limits;
				limits; **U.S.**
	ge: ≤140°C (284 F) (s etimes ≤120°C (248 F) fo critical applications) Max: ≤180°C (356 F)	Unexposed side GB/T 9978.1 Sec from edges, 1 the minimum 5).		**e limit.**

Scan to Watch or Bookmark

Ever wondered how fire-resistance standards differ across the globe? 🤔 Our recent FCIA webinar tackled this head-on!

Delivered by Bill McHugh, Richard Walke, Dr Gabrielle Peck, and Abhishek Chhabra as they dissected #IBC, #NFPA, #EN, #BS, #ASTM, #GB, #AS/NZ, #ISO and other critical codes and standards.

Key takeaways included understanding:
- 🔥 The fundamentals of fire-resistance standards.
- 🔥 The fascinating variations between global approaches.
- 🔥 The core elements of fire testing methodologies.
- 🔥 The practical relevance of these standards.
- 🔥 Where you'll encounter these standards in practice.

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FCIA

WHO WE

FCIA is an International Associat
Firestop and Passive Fire Protecti
Special Inspection Agencies, M
Distributors, and more, dedicated
design, installation, inspection, an
firestop systems and effective co
barriers, all essential component
protection.

OUR MIS

FCIA Members are the global e
of life safety passive fire anc
systems.

FCIA focuses on life sa
Integrity, Passion, Engager

OUR V

Since 1999, the FCIA's goals have been – and continue to be – focused on building the reliability of installed firestop systems through the 'DIIM' of Firestopping, as well as focusing on building the firestop and effective compartmentation industry through Advocacy, Education, and Membership.

OUR MEMBERS

FCIA Members are companies that provide services and products to the firestop, fire- and smoke-resistance-rated, and effective compartmentation industries. Through active participation in FCIA and related forums, Members contribute to the advancement of the firestop and effective compartmentation industry and maintain exceptional knowledge of this specialized trade.

25 Years and Counting

FCIA

Testing Labs

Product Certification

Abhishek Chhabra

Standards Bodies

Accreditation

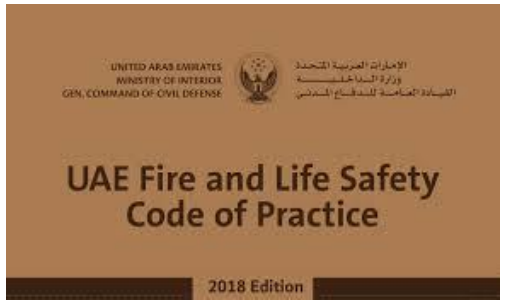
intertek

THOMAS BELL-WRIGHT
A PHENNA GROUP COMPANY

UL Standards & Engagement

ASTM INTERNATIONAL

मानक: पथप्रदर्शक:
Bureau of Indian Standards



IAS INTERNATIONAL ACCREDITATION SERVICE®

NFPA®

TIC.guru

ICC INTERNATIONAL CODE COUNCIL®

SASO

Department for Levelling Up, Housing & Communities

Testing for a Safer Future

An Independent Review of the Construction Products Testing Regime

NFCA®

25 Years FCIA

Fire & Life Safety

Fire and Life Safety Plan

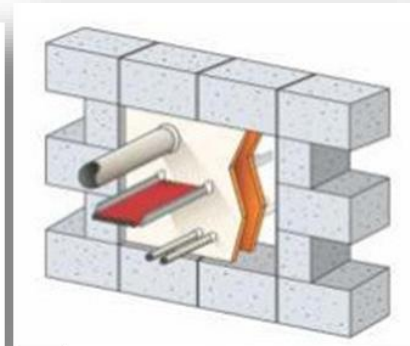
Designing Containment

Fire & Life Safety Plan

From the website of Lagcey-fm, Novant Health Slides

Fire & Life Safety Plan

Designing Containment



Who designs Passive Fire Protection? i.e. specifying specifics of fire rating of walls, doors, glazing, firestopping, etc?

You can see how people vote. Learn more

Architect	30%
Specialist or Fire Consultant	62%
Main Contractors	1%
MEP or Fit out contractor	7%

- Infra
- Transport

- Consultants
- Contractors

oducts

Construction Materials
- Standard products
- Custom Built

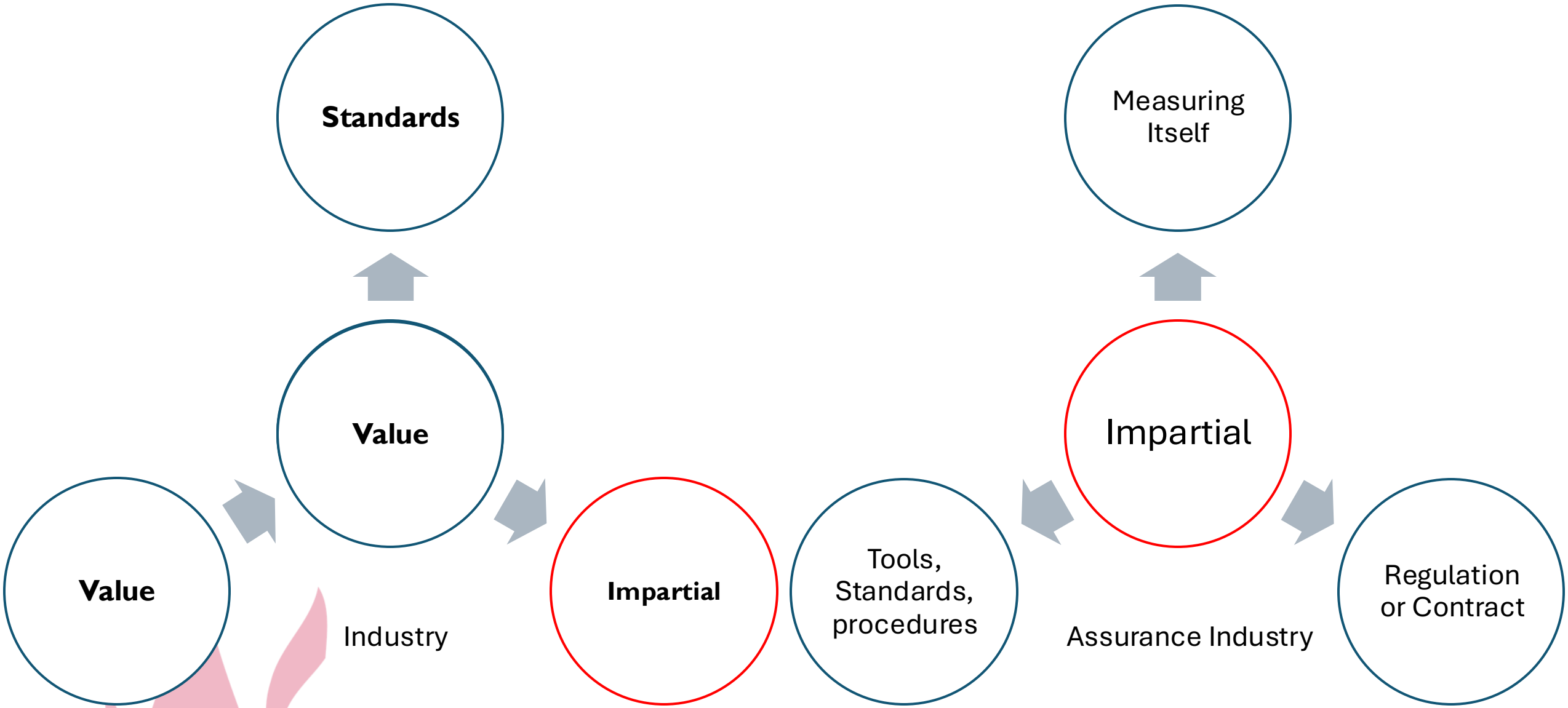
Services

- Maintenance
- Repair

Designing Containment

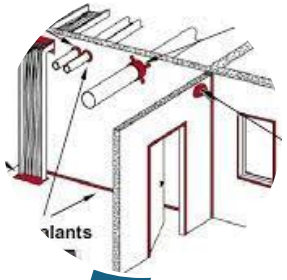
Fire & Life Safety Plan

Assurance Basics


Standards
Measuring Itself
Value
Impartial
Value
Value
Impartial
Tools, Standards, procedures
Regulation or Contract
Industry
Assurance Industry

Measure

Product



Design

Installation

Impartial

Product Certification

Personnel Certification

Inspector Certification

ISO/IEC 17020

- the operation of bodies performing inspection

Inspection of workmanship

ISO/IEC 17024

- Operating certification of persons

Certification or professional capability of work

ISO/IEC 17025

- Testing and calibration laboratories

Assuring materials of any of their properties as well as measuring instruments

ISO/IEC 17065

- Bodies certifying products, processes and services

Assuring products and services being delivered by businesses

FCIA

Fire & Life Safety

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Fire & Life Safety Plan

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Fire & Life Safety Plan

https://www.constructionweekonline.com/business/article-6667-mep-with-a-twist

https://www.imdaad.ae/solutions/facilities-management

https://www.linkedin.com/pulse/technological-marvels-mep-works-dubai-hkz-interior-decoration-llc-2jldf/

The Golden Language of PFP

THE 'DIIM'™

The 'DIIM' of Firestopping™ is defined as the proper 'D'esign, 'I'nstallation, 'I'nspection, and 'M'aintenance of Protection of firestop systems.

When all pieces of the 'DIIM'™ puzzle are present, the result is greater reliability of installed fire-resistance-rated and smoke-resistant assemblies and effective compartmentation.

This ensures that all passive fire protection systems have a better chance of performing as designed, resulting in safer buildings protecting occupants and property and continued use of the building following a fire or smoke event.

FCIA

Codes Guiding Designs call for Fire-resistance

- NFPA 5000 – 101 – Chapter 8
- International Codes –
  - New and Existing Buildings International Building Code – Chapter 7
  - International Fire Code – Chapter 7
- Approved Document B in United Kingdom
- National Building Code of Canada
- UAE Fire and Life Safety Code
- Saudi Building Code
- National Building Code of India
- Other Codes and guidelines documents across the world

Design

- ***Minimum requirements*** - ***Construction*** & ***Maintaining Protection***

FCIA

Building & Fire Code Nomenclatures

- Fire Smoke Compartments – **IBC/NFPA = USA**
  - ***Fire Barrier – Fire-Rated, SYSTEMS Repairs***
  - ***Fire Walls – Fire-Rated, Structural SYSTEMS Repairs***
  - ***Smoke Barriers – Fire-Rated, Smoke, SYSTEMS Repairs***
  - ***Smoke Partitions – NO Fire-Rating, MATERIALS***
  - ***Fire Partitions (Not in NFPA)***
  - ***Archaic Assemblies – Ratings Found in Books…***
  - ***Exterior Walls***
  - ***Fire Compartment (UK/IN)***
  - ***Fire Separations (CAN)***

FCIA 25

Compliance

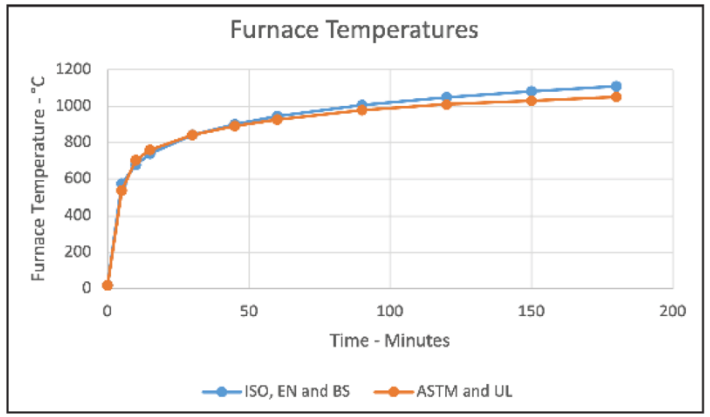
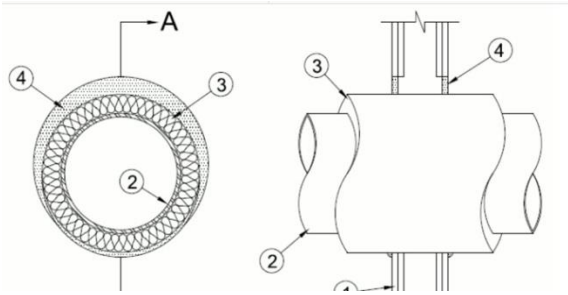
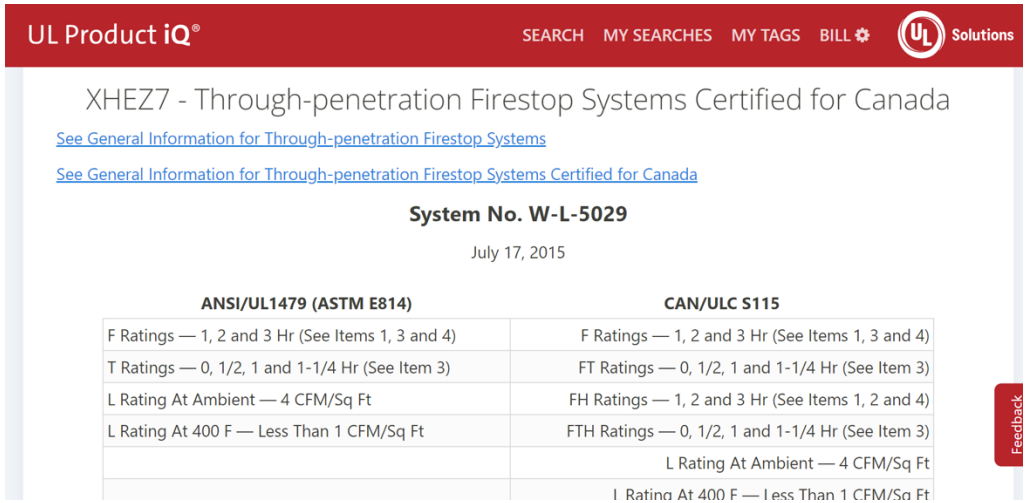
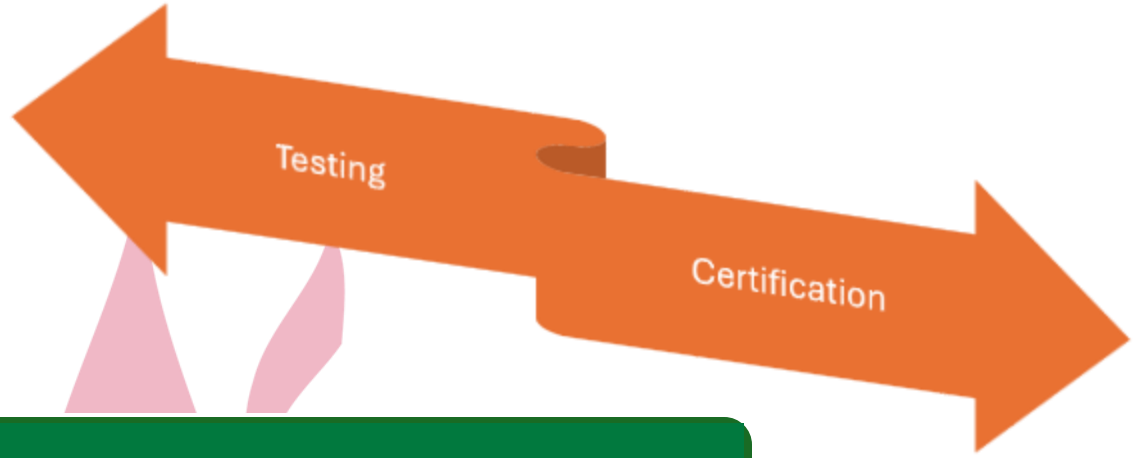


Figure 1 - Comparison of furnace temperatures, the time/temperature curve Berhinig Image







Install - Ready

FCIA

Contractor Qualifications

- FM 4991 – Standard for the Approval of Firestop Contractors
- UL Qualified Firestop Contractors
- FM 4991 / UL-ULC Contractors

Install

FM Approvals®
Member of the FM Global Group

Underwriters Laboratories Inc.®
Qualified Firestop Contractor Program

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

FCIA

FM 4991 Standard for the Approval of Firestop Contractors

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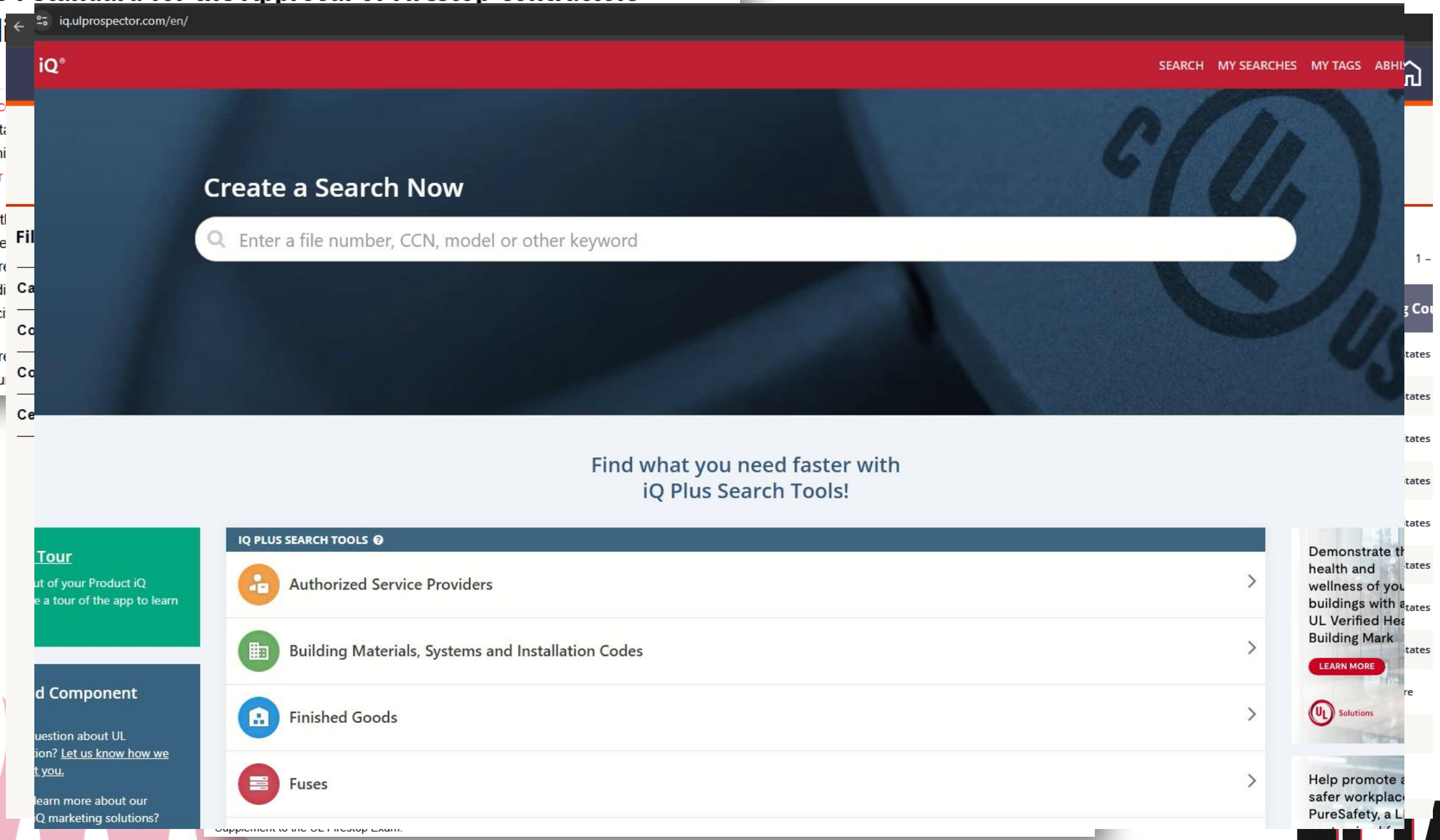
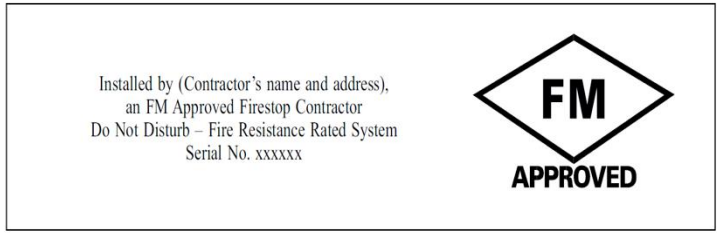


ASTM E2174 / ASTM E2393 – *“Inspection Process”*

Inspect



Firestop Inspection Process
ASTM E2174 – ASTM E2393

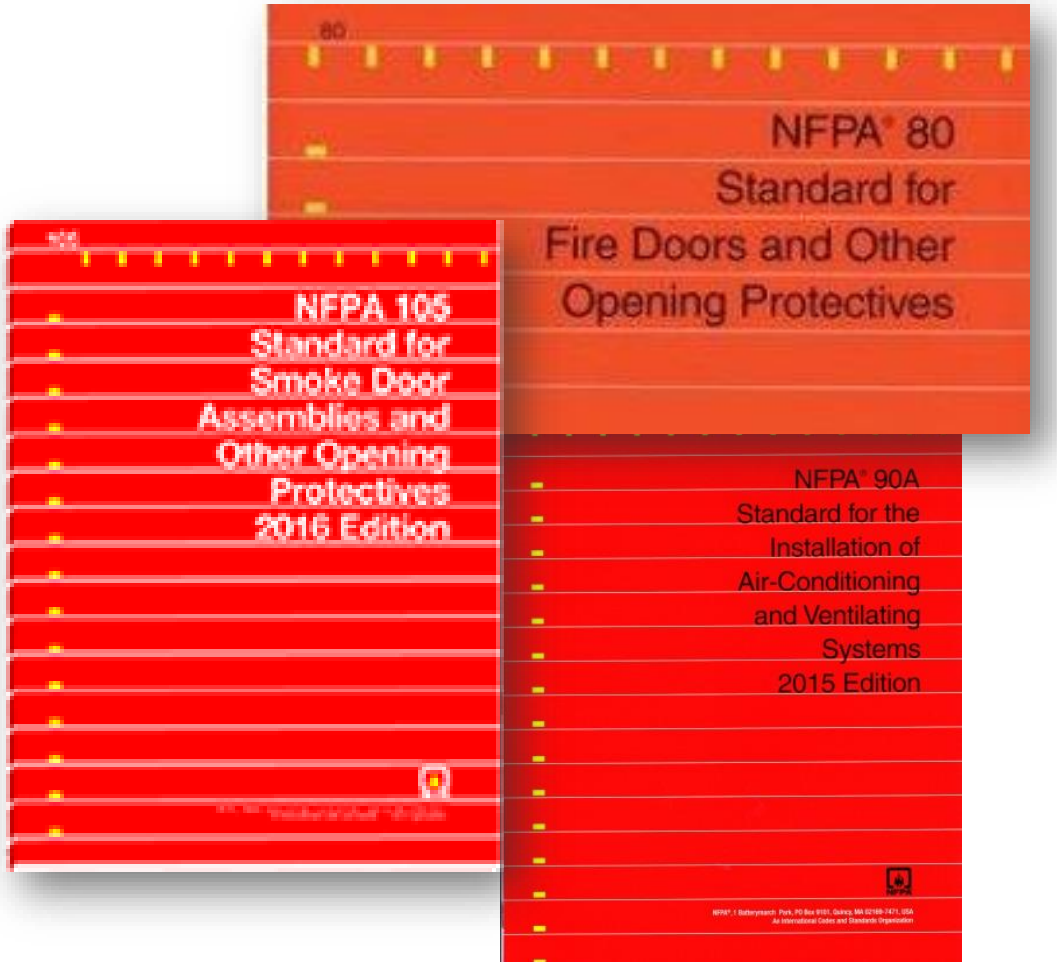
- **Variances / Deviation Notification**
- **ASTM E2174 & ASTM E2393**
  - FS Contractor is notified of any deficiencies within **one day**
- **IBC 1704.2.4**
  - Work is in conformance to the documents
  - Otherwise it is **immediately** brought to the attention of the FS Contractor
  - If not corrected, AHJ and AA will be informed to take action
- **COMMUNICATION AGREEMENT**

Affinity Firestop Photo

Inspect

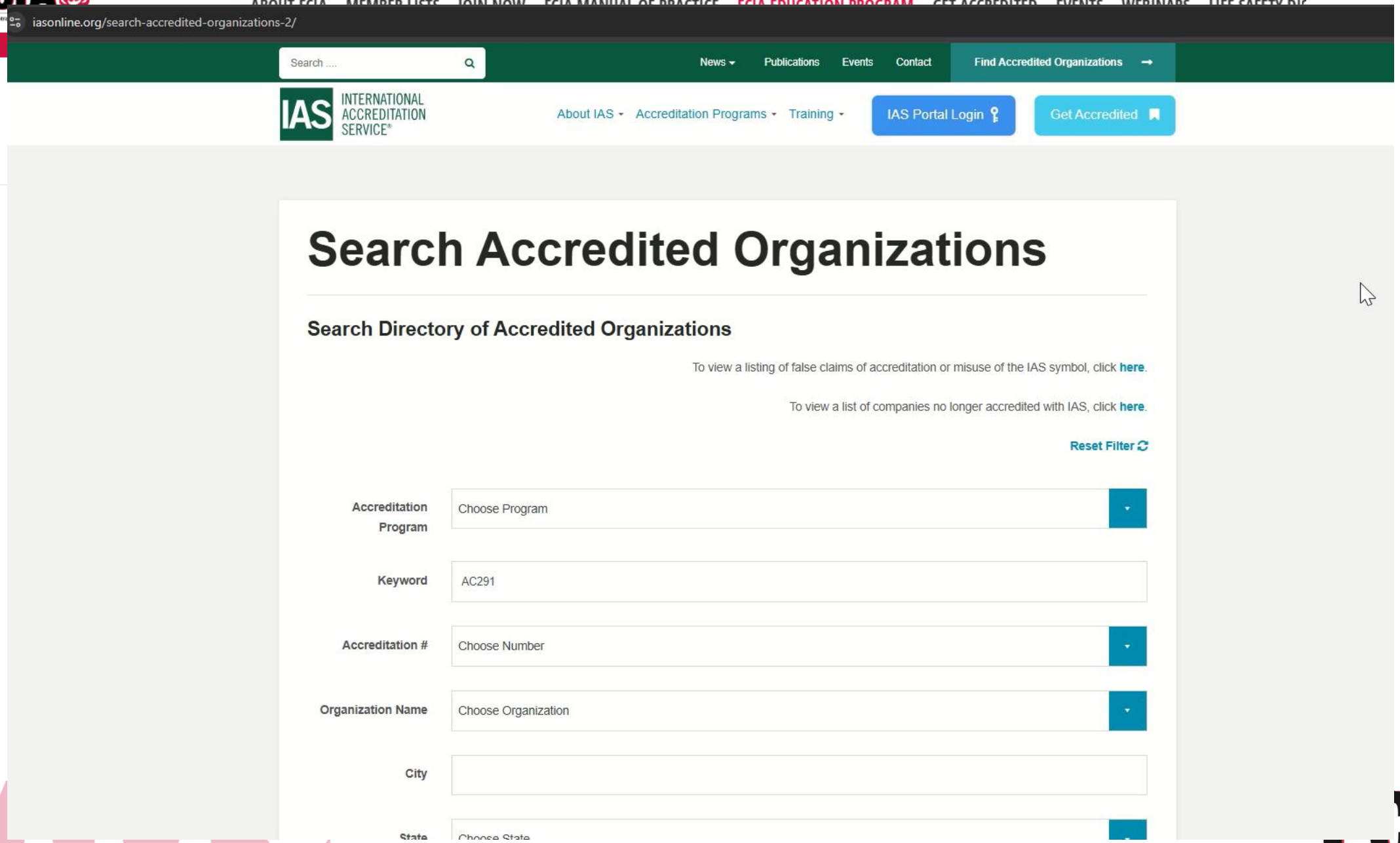
National Fire Protection Association

- Installation, Testing and Maintenance
  - NFPA 80
    - Standard for Fire Doors
  - NFPA 105
    - Standard for Smoke Doors
  - NFPA 90A and 90B
    - Standard for Installation of Air-conditioning and Ventilating Systems
  - NFPA 92
    - Standard for Smoke-Control Systems



Inspect

FCIA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Events
Contact
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Accreditation Programs
Training
IAS Portal Login
Get Accredited
Search Accredited Organizations
Search Directory of Accredited Organizations
To view a listing of false claims of accreditation or misuse of the IAS symbol, click here.
To view a list of companies no longer accredited with IAS, click here.
Reset Filter
Accreditation Program
Choose Program
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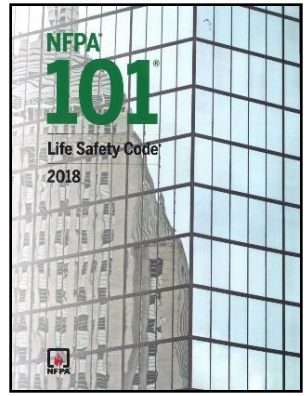
Organization Name
Choose Organization
City
State
Choose State

- NFPA 101
- NFPA 1
- International Fire Code
- UAE
- India
- Saudi Arabia
- ----

- **SECTION 703-707**
  - **704 – Joints & Voids – Protected w/Firestop Systems (Pens, Joints, Perimeter)**
  - **705 – Door and Window Openings – Protected with Fire Doors**
  - **706 - Duct and Air Transfer Openings – Protected with Fire Dampers**
  - **707 – Concealed Spaces – Fireblocking, Draftstopping**
  - **708 – Spray Fire Resistive Materials and Intumescent Fire-Resistive Materials**



Maintain

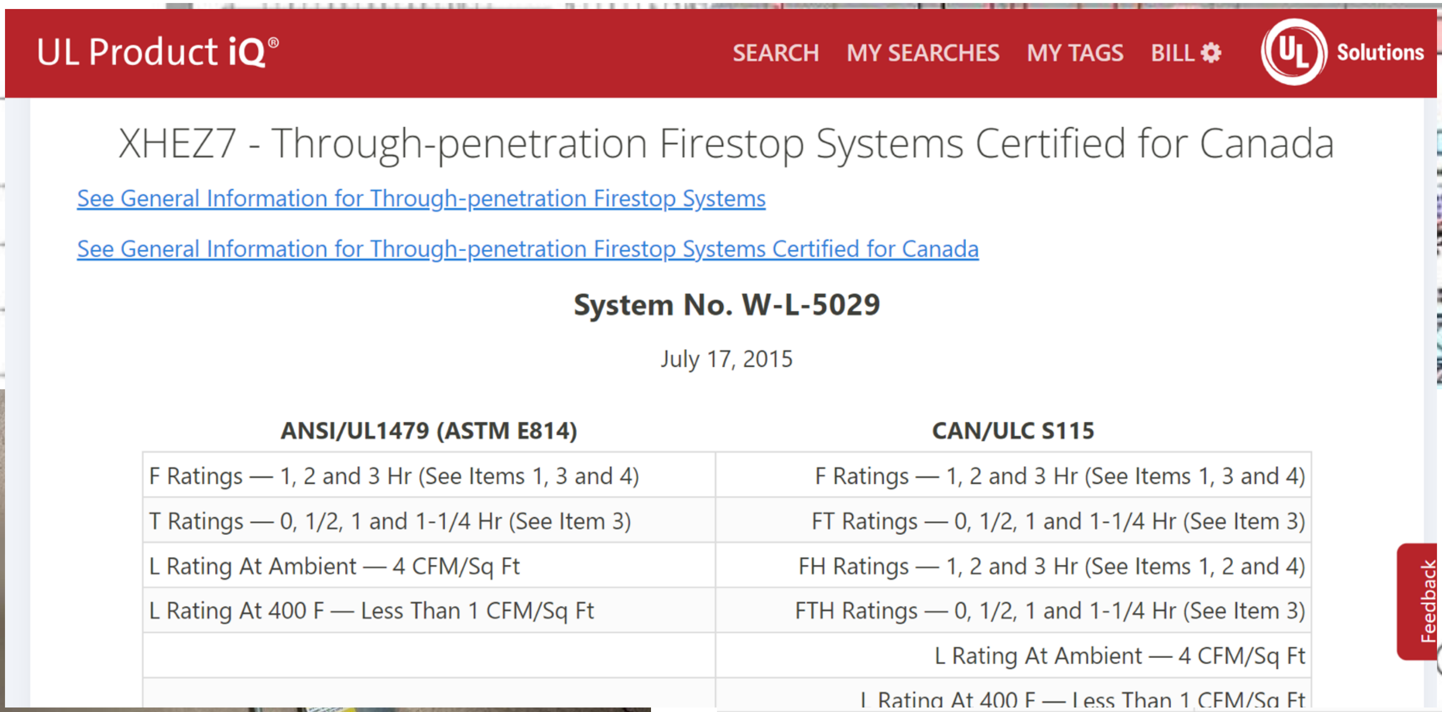
FCIA

Design

Install

Inspect

Maintain


UL Product iQ®

SEARCH MY SEARCHES MY TAGS BILL

UL Solutions

XHEZ7 - Through-penetration Firestop Systems Certified for Canada

See General Information for Through-penetration Firestop Systems

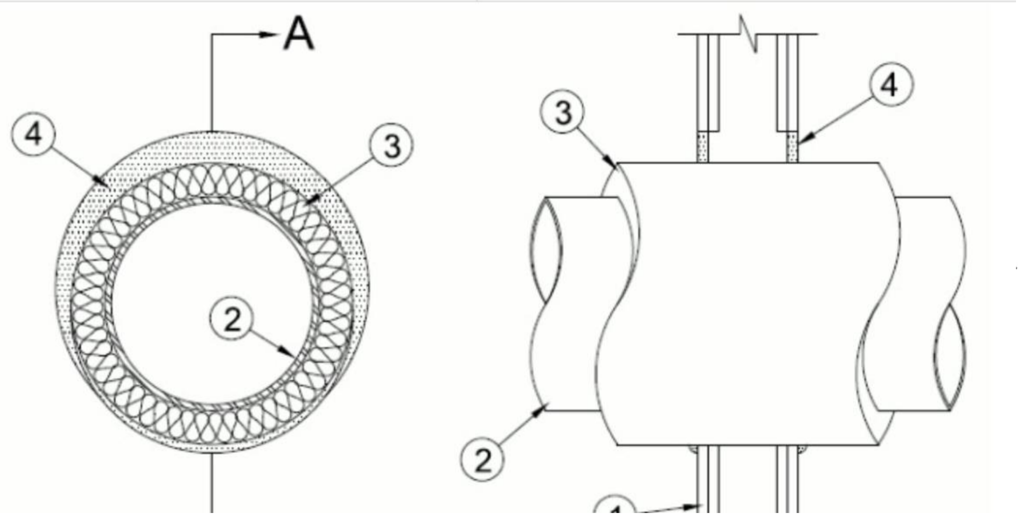
See General Information for Through-penetration Firestop Systems Certified for Canada

System No. W-L-5029

July 17, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1, 2 and 3 Hr (See Items 1, 3 and 4)	F Ratings — 1, 2 and 3 Hr (See Items 1, 3 and 4)
T Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)	FT Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
L Rating At Ambient — 4 CFM/Sq Ft	FH Ratings — 1, 2 and 3 Hr (See Items 1, 2 and 4)
L Rating At 400 F — Less Than 1 CFM/Sq Ft	FTH Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
	L Rating At Ambient — 4 CFM/Sq Ft
	L Rating At 400 F — Less Than 1 CFM/Sq Ft

Feedback



The Manual Of Practice

Table of Contents

FCIA
Firestop Contractors International Association

FCIA

FCIA FIRESTOP EDUCATION PROGRAM

- FEP Level 1 - DIIM

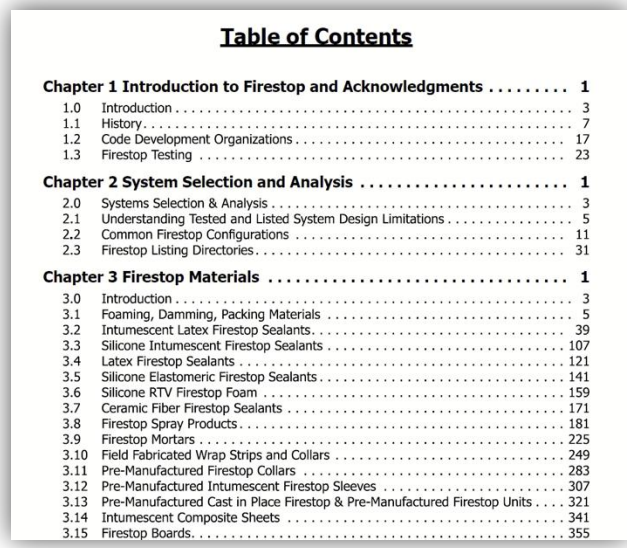
o Proper Design, Installation, Inspection and Maintaining Protection results in safe buildings. FCIA recommends and has developed codes and standards around each aspect of the DIIIM

- FEP Level 2 – Firestop Materials, Systems and Analysis

o This detailed 16 hour master class in firestop product and system technology brings knowledge needed to choose, install, inspect and analyze firestop systems.

- FEP Level 3 – Estimating & Project Management

o Modules include Estimating and Project Management tips from industry experts, with multiple items for consideration during company proposal development and field operations.



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FCIA

Firestop Level 1

'The 'DIIM' of Firestop for Fire and Life Safety'

The **Firestop Level 1** program covers the **'DIIM' of Firestopping™** – proper 'D'esign, 'I'nstallation, 'I'nspection, and then 'M'aintaining Firestop Protection.

Firestop Level 2

'Firestop Materials and Systems'

With 13 courses comprised of 20+ modules, the **Firestop Level 2 'Firestop Materials and Systems' Program** dives deep into firestopping and effective compartmentation.

Firestop Level 3

'Specifications, Estimating, and Project Management'

'Specifications, Estimating, and Project Management', the **Firestop Level 3 Program**, covers the fundamental basics every Estimator and Project Manager must know.

FCIA

NFCA
National Fireproofing Contractors Association

NFCA HANDBOOK OF ACCEPTED FIREPROOFING KNOWLEDGE

Version 1.0
© 2007 (Slides), 2015-2020

FCIA FIRESTOP MANUAL OF PRACTICE

'THE STANDARD'

FCIA
Firestop Contractors International Association

FEP ONLINE PROGRAM

FCIA
Education Program

D
'D'esign

Proper 'D'esign of firestop systems begins with the design and specification community. By educating the Architects and Specifiers who are designing these installations about firestopping and all elements of passive fire protection, properly 'D'esigned construction documents are provided, improving accurate communication to Contractors, Special Inspection Agencies, and Building Owners and Managers.

I
'I'nstallation

When firestop products are 'I'nstalled to the Manufacturer's installation instructions and tested and listed system specs, the result is an installed firestop or fire-resistance-rated SYSTEM. Proper 'I'nstallation of Firestop Systems by a Specialty Firestop Contractor company that has a culture of 'Zero Tolerance' provides continuity to breached fire-resistance-rated and smoke-resistant barriers.

I
'I'nspection

Using competent, third-party independent 'I'nspection by Firestop Special Inspection Agencies with proper equipment, qualified personnel, and experience adds an integral quality-check of the firestop installation process.

M
'M'aintaining Protection

'M'aintaining Protection of existing fire-resistance-rated and smoke-resistant assemblies, including all aspects of passive fire protection and rated and non-rated assemblies, is critical to fire and life safety. These systems need regular attention to conform to the International Fire Code requirements and to ensure continued protection.

FCIA

WE MAKE
PASSIVE FIRE
PROTECTION
WORK.

JOIN US.

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