CORE CONCEPT

Passive Fire Protection Course: Firestopping, Fire Doors and Intumescent Fireproofing

27 September – 1 October 2027
London - Central London four-star

Passive Fire Protection Course: Firestopping, Fire Doors and Intumescent Fireproofing

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Introduction:

Passive fire protection, covering firestopping, fire doors and intumescent fireproofing, is a 1-week course for fire protection engineering, inspection, integrity and installation teams that ends with a Passive Fire Protection Inspection and Remediation Plan for a case organisation. Many buildings and plants carry penetration seals matching no listed system, fire doors that no longer latch, untested dampers and cracked or thin steel coatings, so compartments and structure fail before their rated period. Nominees already specify, install or inspect barriers and coatings, and learn through inspection walkthroughs. CoreConcept Training Center delivers this passive fire protection course.

Course Objectives:

- Interpret fire resistance ratings, test curves and listed system data for walls, floors, shafts, closures and coated steel
- Specify firestop, fire door, fire damper and fireproofing systems with submittal review criteria and installation hold points
- Distinguish cellulosic building exposure from hydrocarbon pool fire and jet fire exposure when selecting intumescent or cementitious fireproofing
- Inspect penetration seals, joint systems, door sets, dampers and coating thickness against listings and inspection standards
- Diagnose degradation such as corrosion under fireproofing, unlisted repairs and later-trade breaches and rank remediation by risk
- Prepare a Passive Fire Protection Inspection and Remediation Plan with survey frequencies, defect priorities and re-inspection criteria

Target Audience:

- Fire protection engineering teams responsible for specifying rated assemblies, firestops and structural fireproofing
- Building and plant inspection teams responsible for QA/QC hold points and third-party verification of barriers and coatings
- Asset integrity and facilities engineering teams responsible for maintaining compartmentation and fireproofing in operating sites
- Installation contractor supervisors responsible for applying firestops, hanging fire doors and spraying fireproofing to listing
- Coating inspection teams responsible for surface preparation, thickness readings and repair acceptance on coated steel

Course Outline:

Day 1: Fire Resistance Foundations, Compartmentation and the Barrier Baseline

- ISO 834 Cellulosic Time-Temperature Curve and Rated Periods
- Integrity, Insulation and Loadbearing Criteria for Rated Assemblies
- Compartment Wall, Floor and Shaft Lines on Strategy Drawings
- Pool Fire and Jet Fire Heat Flux Exposure Profiles
- Barrier Asset Register Baseline Survey of Existing Construction

Day 2: Test Standards, Listed Systems and Specification Documents

- ASTM E119 Assembly Testing and Listing Directory Interpretation
- Hydrocarbon Curve Rapid-Rise Testing for Process Plant Steel
- ISO 22899 Jet Fire Resistance Test for Coating Systems
- Engineering Judgement Letters for Untested Penetration Configurations
- Specification Clauses, Submittal Review and Hold Point Schedule

Day 3: Firestopping, Fire Doors, Dampers and Fireproofing Application

- Penetration Seal Selection for Cables, Plastic Pipes and Ducts
- Head-of-Wall Joint Systems With Movement Capability Ratings
- NFPA 80 Fire Door Assembly Hardware and Clearance Checks
- Fire Damper Fusible Link Drop Test and Access Records
- Intumescent and Cementitious Coating Surface Preparation and DFT Readings

Day 4: Failure Modes, Degradation and Third-Party Inspection

- ASTM E2174 Firestop Inspection With Destructive Sampling
- ASTM E2393 Joint System Inspection Sampling Plan
- Corrosion Under Fireproofing Detection, Cracking and Disbondment Mapping
- Unlisted Repairs and Later-Trade Breaches Defect Log
- NFPA 105 Smoke Door Assembly Survey and Risk-Based Survey Frequency

Day 5: Inspection Walkthrough and the Remediation Plan

- Hospital Riser Walkthrough of Penetration Seals and Door Sets
- Gas Plant Pipe Rack Walkthrough of Epoxy Fireproofing Condition
- Warehouse Compartment Walkthrough of Damper and Joint Seals
- Case Organisation Defect Ranking and Remediation Cost Schedule
- Passive Fire Protection Inspection and Remediation Plan Completion

Skills You Will Gain:

- Fire Resistance Rating Interpretation
- Listed System Verification
- Firestop Selection
- Fire Door and Damper Inspection
- Fireproofing Thickness Measurement
- Coating Degradation Diagnosis
- Third-Party Inspection Sampling
- Remediation Prioritisation

Why Attend This Course:

- Deliver a Passive Fire Protection Inspection and Remediation Plan for a case organisation to the asset integrity manager, fire protection lead and maintenance planner
- Decide whether a contractor's firestop, door or coating submittal matches its tested system before it is installed
- Avoid failed handover inspections, repeated tear-out of unlisted seals and steel members left unprotected by cracked or thin coatings
- Share inspection checklists, defect logs and thickness reading sheets with installation and maintenance colleagues

Conclusion:

Back at work, the participant hands the Passive Fire Protection Inspection and Remediation Plan to the facilities or asset integrity manager, the fire protection lead and the maintenance planner. They use it to decide which penetrations, door sets, dampers and coated members to repair first, which contractor submittals to reject and how often each barrier type is surveyed. After the first remediation campaign, the organisation should compare re-inspection findings, coating thickness readings and repeat defects against the plan and adjust survey frequencies and hold points.

Frequently Asked Questions FAQ:

What should participants know before a passive fire protection course?

Participants should already specify, install or inspect walls, doors, seals or steel coatings and read construction drawings. Bringing a recent firestop submittal, door schedule or fireproofing inspection report helps them apply the walkthrough checklists to their own sites.

How does a passive fire protection course differ from a fire risk assessment or sprinkler design course?

It concentrates on the built barriers and coatings that hold fire back: rated assemblies, penetration seals, door sets, dampers and structural fireproofing. Risk assessment courses judge whole premises, and sprinkler or alarm courses design active systems that detect or suppress fire.

Why does passive fire protection treat hydrocarbon and jet fire exposure separately from building fires?

Hydrocarbon pool and jet fires reach high temperatures within minutes and add erosive force, so building-grade thin-film coatings can fail early. Process plant steel needs coatings tested to hydrocarbon and jet fire curves, with different thickness and reinforcement.

What do participants take back from the passive fire protection course?

Participants take back a Passive Fire Protection Inspection and Remediation Plan for a case organisation, with a barrier asset register, inspection checklists for seals, doors, dampers and coatings, a defect log and a ranked remediation schedule.