The Approval Process for Firestop Contractors – Approval Standard 4991

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Topics for Today's Discussion

- Definitions
- A description of the program
- The Approval process
- What exams are required and what are they like?
- What needs to be in a QA Manual?
- What are the audits like?
- How do I maintain the Approval?

Definitions

- Approved Firestop Contractor
- Contractor
- Designated Responsible Individual (DRI)
- Learning Unit (LU)
- Surveillance Audit
- Re-examination

Definitions

- **Approved Firestop Contractor**
  - A contractor who meets the requirements of FM Approval Standard 4991.

Definitions

- Contractor
  - A business entity providing the services of installing firestop assemblies, systems and components.

Definitions

- Designated Responsible Individual (DRI)
  - The contractor's employee who meets the criteria contained in FM Approval Standard 4991. The DRI shall provide oversight for the proper design selection, installation and transmission of information to field personnel. The DRI is also responsible for continuing to meet the criteria needed to maintain continued Approval within the firm.

Some Definitions

- ## Learning Unit (LU)

  – Is a standard unit that we use to measure learning. One (1) LU is = one (1) hour of educational training. LUs can be obtained by attending or presenting at conferences, training programs (manufacturer or otherwise) and other educational settings related to firestopping, the construction industry, loss prevention, safety, fire containment, building codes or other areas acceptable to FM Approvals.

Definitions

- ## Surveillance Audit
  - Is a mechanism used to ensure that the appropriate controls are in place and to verify that the contractor is conforming specific requirements as stated in their Approval Report and QA Manual. The audit shall occur at least annually. For Firestop Contractors, the auditor shall visit both the office and a job-site.

Definitions

- Re-examination

   - a periodic requalification required of each DRI. Can be accomplished by written examinations or attainment of continuing education credits

A Description of the Program

- Purpose
- Method to qualify companies
- Assesses commitment to a QA program
- Ability to understand requirements of FCIA MOP and FM Approvals criteria
- Proper selection and installation of systems
- Marketing tool

A Description of the Program

- Purpose
  - To improve the performance and installation of firestop systems and components by examining and qualifying contractors who install such systems.

A Description of the Program

- **Method to qualify companies**
  - Assess the company's commitment to a QA program.
  - Ability of individuals to understand the requirements and restrictions/limitations of the FCIA MOP, FM criteria and design selection/installation.
  - Examine the contractor's training and education of its workforce.

A Description of the Program

- **Assesses commitment to a QA program**
  - Review the company's QA Manual and management's commitment to the manual.
  - Commitment to maintaining a documented and archived record keeping system for all installations.
  - Adherence to the manual, procedures and documentation via follow-up Surveillance Audits – both office and job-site.

A Description of the Program

- Ability to understand requirements of FCIA MOP and FM Approvals criteria
  - Assess DRI's knowledge by requiring passing score of 80 on two (2) separate exams
    - General Information
    - Design Selection

A Description of the Program

- **Proper selection, analysis and installation of firestop SYSTEMS**
  - Assess DRI's ability via written examination.
  - Review the contractor's written QA Manual.
  - Conduct initial Surveillance Audit
    - Conduct destructive examination of installations for conformance to the selected design criteria

A Description of the Program

- ■ Marketing tool
  - – Differentiate your company from the competition.
  - – Placement of FM Approval Mark on installation labels.
  - – Partnering with FM Global
    - • Access to end users and local regulators

The Approval Process

- Part 1 – Pass The FM Firestop Exam, Parts I, II
- Contact FCIA
  - FCIA Firestop Manual of Practice, Education & FM 4991
  - FCIA Exam Dates & Locations @ www.FCIA.org
  - FM 4991 Approved Company appoints DRI's
  - Passing Grade Inspection Personnel receive letter and pass/fail results for proof of competence
- FM Firestop Exam – Installation, Inspection, Systems

The Approval Process

- Part II – Management System & Audit
- Contact FM Approvals
- Submit an application for Approval
- Proposal by FM and project authorization
- Submit a written QA Manual
- Office and job-site audits
- Issue documentation and listing

The Approval Process

- Contact FM Approvals/Request an Application for Approval. Provide all contact information
  - Email to Information@FMApprovals.com
  - Legal company name
  - Need a physical address
  - Contact – name, phone and email

The Approval Process

- Proposal and project authorization
  - FM engineer will review the information
    - The company must have been in the firestopping business for at least two (2) years
  - Generate a written cost proposal
  - Explain main steps to a program
    - Written exams – Parts I, II
    - Surveillance audit
    - QA Manual review
    - Approval report and documentation

The Approval Process

- Assess DRIs – must take and pass two (2) DRI exams
  General Exam and Design Selection Exam
- Each company must have at least one (1) DRI
- An individual can be a DRI for one (1) location only

The Approval Process

- **Submit a written QA Manual**
  - FM provides a list of items to address
  - You decide how your level of commitment
  - We don't tell you how to run your business
  - We review, comment and make suggestions
  - No minimum length or number of pages
  - FCIA has a template members can use

The Approval Process

- Office and job-site audits
  - Initial audit usually by your project engineer
  - Review of documentation and material storage
  - Not interested in financials
  - Office and job-site - at least annually
  - Verify minimum two (2) years in firestopping business and adherence to QA Manual

The Approval Process

- **Issue documentation and listing**
  - Approval report – contains findings/requirements
  - Listing in the FM Approval Guide
  - Certificate of Compliance issued to the company
  - Certificate to each DRI

What Are the Exams Like?

- Closed books
- No calculators or mfg's catalogs needed
- All questions are T/F and multiple choice
- 2 hrs 45 minutes to complete both exams
- Score of 80 needed on each exam

What Are the Exams Like?

- ■ The General Exam − Part I
  - – About 35 questions on the MOP and FM Approval Std
  - – Since it is closed book, questions are general in nature

What Are the Exams Like?

- ## The General Exam – examples

Which answer best describes Perimeter Fire Containment Systems?

     a) They are typically non-rated walls

     b) There is a void between the edge of the floor/ceiling (typically rated) and the interior face of the wall

     c) The interior face of exposed framing requires some means of protection

     d) All of the above

What Are the Exams Like?

- The General Exam – examples

  True or False?

  Any material used as a packing material can remain in place after the installation is completed.

  False

What Are the Exams Like?

- The General Exam – examples

  True or False?

  Head of wall systems generally require that the entire gap be filled with a packing material before applying the sealant.

  True

What Are the Exams Like?

- Design Selection & Analysis Exam – Part II
  - You do not need to remember any specific designs
  - Copies of the applicable design(s) are provided
  - Many different mfg's products are included
  - You are given a situation and asked to determine which design(s) can be used

- Systems Selection, Analysis, Installation & Inspection Questions

What Are the Exams Like?

- ## Design Selection & Analysis Exam – examples

- The concrete wall is 4 1/2 inches thick. The F rating needed is two (2) hours. The joint width is 3/4 inches. No movement capability or air leakage requirements have been specified. Which system(s) meet this criteria?

   a) FF-S-0028 only

   b) FF-S-0026 only

   c) FF-S-0026 or FF-S-0028 can be selected

   d) FF-S-0026, FF-S-0028 or FW-D-1012 can be selected

   e) None of the configurations shown above can be used

   Any guesses?

   Why?

What Are the Exams Like?

- ## Design Selection & Analysis Exam

- Most of the problems are as tricky as the previous one but you will need to read them carefully.

- There are 5 problems each with 5 parts so each answer is worth 4 points.

- There are problems on Through Penetrations, Joints, Head of Wall and Perimeter Edge

- You need to know all these even if you make a business decision to only do some of these types of firestopping

What Needs to be in a QA Manual?

- You must address just about everything you do and have a process for doing it.

- Management decides what level of quality a company will provide.

- There is a cost associated with a quality program.

- There is a cost associated with a lack of quality – call backs, bad reputation, loss of projects.

What Needs to be in a QA Manual?

- We don't tell you how to run your business!
- You tell us what you do.
- We'll audit you to make sure you're doing what you say you're doing.

What Needs to be in a QA Manual?

- Management Organization
- Receiving Inspection
- Material Storage
- In-Process Controls
- Final Assembly and Test

What Needs to be in a QA Manual?

- Assign a unique document name
- Assign a date of issue
- Show revision levels
- Number all pages and appendices
- Include a Table of Contents

What Needs to be in a QA Manual?

- Non Conforming Materials

- Procurement and Supplier Control

- Design Selection

- Drawing and Document Control

- Corrective Action

What Needs to be in a QA Manual?

- Measurement and Test Equipment
- Personnel Training and Certification
- Recordkeeping
- Miscellaneous

What Needs to be in a QA Manual?

- An example – Material Storage
- Basic Concept
- Temporary holding of raw materials
- Control of the environment (temperature, dry)
- Not to change the material in any way
- Adequate identification – prevents damage, deterioration, loss and theft

What Needs to be in a QA Manual?

- Make it available to all personnel

- Require all personnel to annually review the manual (and sign a statement acknowledging they have reviewed it and understand it)

- Conduct your own internal review – don't count solely on outside organizations

What Needs to be in a QA Manual?

- Support and commitment by upper management
- Written instructions addressing foreseeable events and situations
- Knowing that an ounce of prevention is worth a pound of cure

What Are the Audits Like?

- Initial audit as part of the Approval
  - Office and job-site components
  - Review of records and facility
  - Compare your QA manual to what is actually being done
  - Conducted by your project engineer
  - Can take from 4 to 8 hours

What Are the Audits Like?

- Office audit
  - Review one or more submittal packages
  - Examine material storage conditions
  - Review how design information is transferred to the job-site (how does the installer / firestop containment worker know which design goes where)

What Are the Audits Like?

- Job-site audit
  - Examine material storage
  - Review documentation on site
  - Witness several installations being done or conduct destruction examination on several items

What Are the Audits Like?

- **Follow-up Surveillance Audits**
  - Conducted annually
  - Done by an auditor from our Technical Auditing Dept
  - Both office and job-site required
  - Can be unannounced but most likely the auditor will call ahead and make sure the necessary people are available
  - Similar to original audit
  - Probably completed in 4 hrs or less

Maintaining Your Status as a DRI

- Continued employment with the company
- Continuing education/ obtaining LUs
- Re-examination every three (3) years

Maintaining the Company's Approval

- Continued knowledge and ability
- Satisfactory follow-up Surveillance Audits
- Employment of at least one (1) DRI

Maintaining the Company's Approval

- **Continued knowledge and ability**
  - Satisfactory performance resulting from Surveillance Audits
  - Satisfactory performance of firestopping installed under this program

Maintaining the Company's Approval

- **Satisfactory follow-up Surveillance Audits**
  - Office and job-site
  - Review of records and submittal packages
  - Storage and handling of materials
  - Handling non-conformances
  - Inspection by company personnel
  - Destructive examination at job-site
  - Labeling

Maintaining the Company's Approval

- Employment of at least one (1) DRI
  - Verification of employment
  - DRI for only one (1) location
  - Continuing education/re-examination reminder
  - About 33% of contractors have more than one (1) DRI

Maintaining Your Status as a DRI

- Continued employment with the company
  - Must remain employed with the company
  - Status does not automatically transfer to a new employer
  - Active in position with responsibilities as a DRI

Maintaining Your Status as a DRI

- ■ Continuing education/ obtaining LUs
  - − One (1) LU = one (1) hour of education or training
  - − Attending FCIA conferences (12 LUs) each
  - − Manufacturers training (varies on duration of training)
  - − Webinars
  - − Other educational opportunities
  - − Don't mix up CEUs and LUs   1 CEU = 8 LUs

Maintaining Your Status as a DRI

- Re-examination every three (3) years
  - Notified by FM Approvals six (6) months before deadline
  - Deadlines are either June 30th or December 31st
  - Written re-exam and 48 LUs are required
  - Obtain 72 LUs – written exam is waived
  - < 48 LUs – only option is to retake original exams
  - Updated DRI certificate issued

Questions?