FM Approvals Update

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Agenda

- Why FM Approvals?
- Requirements for Approval
- Growth of the program
- FAQs
FM Approvals

- Third party certification and testing organization (owned by FM Global)
- Focused solely on Approving products and services that promote Property Loss Prevention
- Conduct follow-up surveillance audits
- Publish online FM Approval Guide and RoofNav
- Write FM Approval Standards based on research
  - FM 4990 Firestopping (December 2009)
  - FM 4991 Firestop Contractors (October 2013)
Why Should I Partner With FM Approvals?

- FM Approvals is a Nationally Recognized Testing Laboratory (NRTL)
- Products and services accepted by end users and local regulators
- Competitive advantage & marketing differentiation
- You are also partnering with FM Global
FM Global

- A commercial and industrial insurance company with a different focus and message
- Insure 1/3 of Fortune 1000 globally
- Believe that the majority of losses are preventable through engineering
- Research based engineering
- Nearly 2,000 engineers worldwide
- Mutual company focus
  - $435 million membership credit to our clients in 2017
Basis for Approval

- Contractor has been in the firestop installation business for the two (2) year period immediately prior to obtaining Approval.
- Minimum of one (1) DRI employed by the contractor per location
- An initial, in-house and job-site Surveillance Audit of the contractor’s quality control program. Continued on an annual basis.
- A documented and archived record keeping system for all installations.
Designated Responsible Individual (DRI)

- The DRI has a demonstrated knowledge of the FCIA MOP, FM Approval requirements, overall product knowledge in his/her area of expertise and the ability to select firestopping components, systems and assemblies that will meet or exceed written specifications.

- Must pass both written exams with 80% or greater

- Every three (3) years
  - Pass a written re-exam and obtain 48 LUs (6 CEUs) or
  - Obtain 72 LUs (9 CEUs) and re-examination is waived or
  - Pass both initial written exams (No LUs)
Surveillance Audit (Office)

- The intent is to verify the contractor’s quality control program, system design selection capabilities, training, transmission of system design requirements to field personnel, and handling of non-conformances.
- Documented and archived record keeping system for all installations
- Storage / segregation of materials
Surveillance Audit (Job Site)

- The intent is to verify the contractor’s quality control program, successful installation, marking of installed systems and assemblies, and handling of non-conformances.
- The job site can be working or complete. Site must be accessible by contractor and FM Approvals.
- Project submittal package for that job site shall be available for review.
- FM Approvals will review installation of firestopping, material labeling and handling, project documents, etc.
## Growth of the Program

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Growth of the Program

- 2018 Exams in the Middle East – administered exams to 50 individuals
- Exams – administered exams to approximately 50 individuals
- There are Approved Firestop Contractors in the following countries:
  - USA
  - UAE
  - Qatar
  - Singapore
FM Approval Guide

- www.approvalguide.com
Understanding the Benefit (UTB)

Understanding the Benefit

FM Approved Roofing

The Hazards

Roofing systems are the first line of defense in the complete building envelope that includes the roof, walls, windows, doors and flashing. Roofing systems must be able to protect a structure from the natural hazards associated with the local environment, including rain, hail, snow, high winds, temperature extremes—even fire.

Wind rushing over a roof, for instance, produces lift, much like an airplane wing. This lift creates tremendous turbulence and dynamic stresses. Powerful eddies and vortices, which resemble horizontal tornadoes, churn along roof perimeters and corners. These forces can rip off roof covers, flashing, insulation and the underlying roof structure.

The failure of a building’s roof and other building envelope elements, including walls, windows and doors, can have a devastating impact from which a business may not be able to recover. When a roof is damaged or destroyed, the building contents can be exposed to flooding and contamination, further compounding the loss.

Loss prevention begins with knowledge. Most property losses, including those involving the roof, can be prevented. FM Global continues to work hard to help clients in wind-prone areas to improve their roofs and other components of the building envelope. FM Approvals is doing its part to help property owners avoid losses by continually improving Approval standards and by helping to make it easier for designers, architects and contractors to specify and install FM Approved roofing systems.

FM Approvals also works to provide Approval Standards and FM Approved products that support sustainable building practices, including green roofs (e.g., vegetative, light-weight covering), building-integrated photovoltaics (BIPV), and high/low lighting for day lighting.

Testing Required for Approval

FM Approvals is a leader in certification and Approval of roof assemblies. FM Approvals is the only organization in the world that tests complete roof assemblies when subjected to multiple tests such as fire testing above and below the deck, wind-uplift testing, hail-damage testing, accelerated weathering, water leakage, foot traffic and corrosion-resistance testing of metal parts.

Benefits

- Performance-based testing ensures real-world property loss prevention performance when installed correctly.
- Growing global availability of FM Approved roofing products and adoption or recognition of FM Approvals by local certification agencies.
- Wide range of coverage related standards support innovative green building designs, including vegetative roofing and flexible and rigid photovoltaic systems.
- Large-scale, 12 x 24 ft. (3.7 x 7.3 m) wind uplift testing provides a true measure to real-world performance.
- Audits of manufacturing facilities.
- FM Approved roof assemblies are listed in UL Approvals' RoofNav® tool for roofing professionals providing anytime, anywhere access to assurance.

Successes

- The packaging company of Americans Winter Haven, FL, USA, manufacturing Treasury experienced a direct hit from Hurricane Wilma, a Category IV hurricane, and survived with relatively minor damage while many buildings around it that their roofs topped off the company’s building was built using FM Global roofing standards and is FM Approved roof assembly.
- The first FM Approved Roofing Integrated Protection (RIP) roof system was awarded to SOFIMA, Inc. for its Photovoltaic Module Systems in April 2011. The systems were evaluated based on Approval Standard 4491, Flexible Photovoltaic Modules.

A roof assembly is tested to meet:

- The interior fire performance requirements using the FM Approvals Construction Materials Calorimeter Test (the only such test in the world developed after many years of research and testing) adopted by NFPA or NFP 276. It’s a pass/fail test giving the rating of Class 1 if the roof assembly passes.
- The exterior fire performance using the ASTM E 108 test method for an A, B or C rating.
- The wind performance using ANSI/ASTM 447 for ratings starting from 60 psi up to 90 psi.
- Hail, corrosion and accelerated weathering performance using FM Approvals’ test methods for hail, corrosion and accelerated weathering. Ratings for hail are MH (moderate hail) and SH (severe hail).

The combined analysis of fire and natural hazards testing on a roof assembly ensures the purchaser and building owner a fire-safe, wind-resistant roof capable of maintaining its integrity for many years.

To obtain FM Approved roof to the needs of the facility owner, designer or contractor, we need to specify the fire and natural hazards ratings. For example, a rating for a roof assembly could be 1-180 A SH, where “1” represents a roof assembly that passed the interior fire test; “180” represents the wind performance rating for the roof in psi; “A” represents the exterior fire rating; and “SH” represents severe hail rating. All this information for all FM Approved roof assemblies is available on RoofNav (www.roofnav.com).

Benefits and Availability

FM Approved roofing products and assemblies are listed in RoofNav, the FM Approvals web-based tool for roofing professionals. RoofNav takes the guesswork out of configuring as FM Approved roofing system by putting all roofing-related information, including a ratings calculator and related installation recommendations from relevant FM Global Property Loss Prevention Data Sheets, in one place.

Why choose an FM Approved roof assembly versus a non-certified product or design? An FM Approved roof means you get a tested roof assembly, not simply a collection of products and parts that may or may not perform as expected. Through RoofNav and properly installed FM Approved products, you get a roofing system that has been proven in extensive testing to perform as specified, including wind uplift, fire-resistance and many other factors.
Frequently Asked Questions

- I was on the FCIA website and I don’t see my listing. Why not?
  - Approval listings are not available on the FCIA website. You can find them at www.approvalguide.com.

- How do I report that a company is not Approved but claiming that they are?

- What would FM Approvals do if they find out my work has been rejected by an inspector?
  - If there are several issues or repeated concerns, FM Approvals will investigate.
Frequently Asked Questions

- I took the exam and haven’t received my test scores yet. Should I contact the FCIA directly?
  - No, the FCIA is not responsible for administering or correcting exams.
- Do I receive any Learning Units (LUs) for attending FCIA Conferences? Is it the only place?
  - Yes, you receive 12 LU’s for each conference. You can also receive LU’s for related training, education, seminars, etc.
- Can I take the exam anywhere besides the FCIA Conference?
  - Yes, the exam can be taken at your office, our office or a neutral location.
Thank you.

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