

DHI's Fire Door Assembly Inspection Program: Impact and Opportunities for Life Safety Outreach

By Jacob Wexler, FDAI

Promoting building practices that support life safety is the long-standing foundation of the Door and Hardware Institute's core mission to the building and construction industry. DHI's Fire and Egress Door Assembly Inspection (FDAI) program adds muscle to that mission as applied to building team responsibilities for installing and maintaining fire doors to code standards.

DHI's program trains and qualifies Fire and Egress Door Assembly Inspectors (FDAIs) for performing annual inspections now required under the most current versions of the NFPA standards. It is a valuable resource for equipping Architectural Hardware Consultants (AHCs) and other door consultants to better educate owners and designers about code obligations and potential liabilities for non-compliance.

The FDAI program promotes enforcement in tandem with the Door Security & Safety Foundation, which offers online and onsite awareness and educational programs addressing

Some fire door mistakes are easy to spot for the casual observer, as well as for fire door inspectors. In this example, removing a cylindrical lock to install the exit device left an obvious hole that voids the door's fire label. Among other issues, the exit sign and unidentified placard beneath the exit bar are both considered plant-ons—potentially flammable add-ons that also void the door's label.

(Photo courtesy of Securitech, Maspeth, NY)



the respective needs of Authorities Having Jurisdiction (AHJs), charged with enforcement, and facility managers responsible for practical aspects and costs of implementation. The resources are there, and this article speaks to the potential for using them to full advantage to further DHI's life safety outreach.

Understanding Mandated Inspections

The primary reference for discussion with all stakeholders is Section 5.2.1 of the National Fire Protection Association publication NFPA® 80, *Standard for Fire Doors and Other Opening Protectives* (2007 edition): "Fire door assemblies shall be inspected and tested not less than annually, and a written record of the inspection shall be signed and kept for inspection by the AHJ." The requirement, with updates in the 2010 and 2013 editions of the standard, is further expanded in NFPA 101, *Life Safety Code*, 2012 edition, and has been incorporated into both the *International Building Code* and the *International Fire Code*.

The immediate challenge for door and hardware industry professionals is building awareness of the annual inspection requirement. Designers, owners and their facility managers especially need to understand the standards' specific compliance requirements, which will ensure successful inspections and, most importantly, fire doors that perform effectively when needed. For many facility managers, the long-standing assumption is that doors that are listed, self-closing, and self-latching are code-compliant. That limited understanding leads to observations of innumerable and varied problems in installed fire doors.

Alignment problems resulting in visible perimeter gaps are often observed in new installations due to imperfect site conditions, as well as older doors where buildings have settled. Even normal wear and tear takes a toll: a rotting sill causes frames to be out

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of square, resulting in gaps, with high-traffic doors subject to accelerated impacts. Hardware or gasketing can be improperly installed. In extreme but not uncommon cases, doors are modified, invalidating their labels (see photo, previous page). Sometimes fire doors are even propped open for convenience. These are just a few examples of common deficiencies that would result in failed inspections at best, with worst-case scenarios that include performance failures and lives at risk during actual fires.

Inspection Criteria

NFPA 80 (Section 5.2.4) defines compliance criteria to be verified "as a minimum" for swinging doors with builders hardware or fire door hardware, which are intended to detect these and other unsafe conditions in fire doors during required inspections. DHI's training for FDAI inspectors translates the NFPA criteria into general inspection guidelines. For the informed facility manager, this checklist can also serve as practical insurance against the substantial costs of remediating or replacing doors that fail inspections or, worse, liabilities that may be incurred due to failure in a fire.

1. No open holes or breaks
2. Door and frame in proper alignment
3. Clearances not to exceed maximums defined in NFPA 80, Sections 4.8.4 and 6.3.1.7
4. No missing or broken parts

5. Properly functioning latching hardware
6. Properly functioning closing device
7. Hardware listed and clearly labeled where required
8. Auxiliary hardware not to interfere with the operation of the door
9. Proper gasketing and edge seals with no gaps
10. No field modifications to void the label
11. Prevention of door blockage

Importantly, NFPA 80 (Section 5.2.3.1, 2013 edition) also states, "Acceptance testing of fire door and window assemblies shall be performed by a qualified person with knowledge and understanding of the operating components of the type of door being subject to testing." It is useful to note here that the standard defines a qualified person (in Section 3.3.95) as a "person who, by possession of a recognized degree, certificate, professional standing, or skill, and who, by knowledge, training, and experience, has demonstrated the ability to deal with the subject matter, the work, or the project."

Where this definition is broadly stated, DHI, as the voice of door industry expertise, has stepped in to define what constitutes a "qualified person" for the specific purpose of fire door inspections. By both its scope and depth, the FDAI program ensures that its trained inspectors are qualified to

Fire door inspectors trained by DHI under the FDAI program are qualified under the highest standards to perform inspections mandated under the NFPA 80 standard, beginning with the 2007 edition.



Book cover image courtesy of NFPA

perform those inspections with consistency and for best results.

Certifying FDAIs through Intertek

FDAI training offered by DHI for AHCs and other door and hardware professionals who have satisfied course prerequisites encompasses a four-day (32-hour) curriculum, available both in the classroom and online. The course builds on product knowledge and application understanding of doors, frames and hardware to explain NFPA 80 inspection requirements and proper documentation practices, as well as the NFPA 101 code.

Graduates of the course earn the FDAI credential and are qualified to conduct fire door inspections. They also have exclusive use of inspection report forms developed by DHI to document inspections for filing by building owners to ensure compliance with code requirements.

Through DHI's partnership with Intertek, FDAI graduates are eligible for certification as fire door inspectors under the Intertek Qualified Personnel (IQP) program. This third-party qualification provides enhanced credentials

for promoting FDAI inspectors to owners as the optimal resource for satisfying both the letter and intent of NFPA fire inspection and documentation standards.

AHCs on the Front Line

By adoption of the new standards into its codes, the building industry has clearly affirmed the value of regular inspections to ensure the proper maintenance of fire doors so critical to occupant life safety. Achieving the full benefits of compliance depends largely on the commitment of building owners, the diligence of informed, proactive facility managers representing their interests, and active enforcement by AHJs. The door industry is indisputably the best source of expertise that these stakeholders need to fulfill those specific roles. In turn, AHCs (along with other knowledgeable door and hardware professionals) can play a vital role in industry outreach to all in two primary areas:

EDUCATION Many building owners may not even be aware of fire door inspection requirements and their responsibilities under the new standards. Discussing these requirements also

provides the framework for door consultants to remind owners of potential liabilities for the failure of fire doors and other life safety systems. A strong case should be made for using FDAIs to reduce potential exposures. Also take advantage of opportunities for discussing relative costs of installing and maintaining code-compliant fire doors in the context of potential costs for wide-scale replacement or upgrades to remedy inspection failures.

While designers and specifiers should be well-informed of new fire door inspection requirements, the best policy is to include the subject in routine discussions of code developments. Reminded of owner obligations and liabilities for non-compliance, specifiers should be strongly encouraged both to reference annual inspection requirements and to stipulate the use of trained, credentialed fire door inspectors in project specifications. (Of course, it should be standard practice for AHCs writing specifications to include these important references in their own documents.)

Facility managers overseeing fire door conditions especially need to understand what maintenance is required to meet inspection standards. Consultants can provide additional value to owners by advising the availability of specialized training to address this need. Developed by DHI in partnership with the Door Security & Safety Foundation, awareness presentations and education sessions specifically designed for facility managers are offered online as well as through seminars and onsite education and training programs. For owners of large facilities, providing FDAI training for their facility managers (course prerequisites must be satisfied) may also be an economically attractive option, versus hiring third parties to conduct annual inspections.

DHI and the Foundation offer online education resources for AHJs charged

with reviewing inspection documents. An online tutorial offered through the Foundation helps clarify what AHJs should be looking for in that documentation, as well as appropriate measures to consider for enforcement. Door consultants meeting with local code officials can provide a valuable service by bringing these resources to their attention.

FDAI TRAINING There are also opportunities for AHCs who become FDAIs themselves to provide added value for both their customers and their own businesses. Faced with the requirement for annual inspections (and especially if project specifications call for the use of certified inspectors), owners will appreciate ready access to a familiar resource who can provide that service. In

addition to charging fees for inspections, AHCs may also develop additional revenue channels by consulting on remediation when needed and providing code-compliant solutions.

End Goal

Properly functioning fire doors are integral to every building's life safety systems and procedures. Consider the place occupied by fire extinguishers and elevators in those same procedures. It would be unthinkable for facility managers and owners to neglect the regular inspections and maintenance required for both—and their inspection routines are simple and straightforward.

In the interest of public safety, that's where fire doors need to be. DHI's awareness and educational training

programs are providing vital tools the industry needs to ensure that code-compliant fire doors are properly installed and maintained. With the help of FDAIs and other informed door consultants, we can accelerate the learning curve and streamline implementation.



JACOB WEXLER, FDAI, is Zero International Product and Business Development Manager for Allegion, responsible for managing product research and development for the Zero International brand,

which recently joined the Allegion family of products. He is credentialed as a Fire and Egress Door Assembly Inspector by the Door and Hardware Institute and is certified by Intertek as a fire door inspector. He is also continuing studies for Architectural Hardware Consultant certification with DHI.