

Fire Doors

For www.fireengineering.com

by Gregory Havel

Photos by author



We are all familiar with “fire doors”. Fire-rated door and frame assemblies are required in all fire-rated division walls. The door and frame assemblies usually have a lower rating than the wall, as a 1-1/2-hour-rated door and frame in a 2-hour-rated wall. The rating system assumes that the wall may have combustibles stored against it, while the doorway will be clear; thus the higher rating required on the wall than on the door. The doors and frame will each have a permanently-attached label (Photo1) indicating the manufacturer and model, and that it has been tested to a standard by Underwriters Laboratories or another testing agency.

Let’s keep in mind that the fire code requirements have not always been the same, and that there are fire doors and frames in some of our older buildings that

may not meet today’s codes, and may not have today’s required label.



Photo2 shows a fire-rated door and frame assembly installed in a new building in 1929. This part of the building has had no significant remodeling since then, and as a result the original fire door (in good condition) is still acceptable to the inspectors.

By today’s standard, this plastered masonry wall could achieve a 2-hour fire rating, and the door would need a rating of 1-1/2-hours.

This door and frame is made of steel and painted to imitate the varnished oak of the rest of the doors in the building. The door is filled with asbestos cement, and the frame with cement grout. The wire-glass window matches the windows in the rest of the doors in the building in size.

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Photo3 shows a circular label that indicates only the manufacturer and that it is a fire door. It was manufactured before today's code and testing requirements were in effect. While it will perform better than a non-rated door during a fire, we don't know how well it will perform compared to a modern door, since it has not been tested to the same standards.

Any manufacturers or brand names noted above are used only as examples, and the websites only as sources of additional information.

Reference to them is not an endorsement of either product or manufacturer.

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