Fire Doors

Buildings are compartmentalised to delay the spread of fire from one area to another. The compartments are usually linked by doors to allow for passage of traffic around the building. Door sets have two important functions in a fire, when closed they form a barrier to prevent fire spread and when open they provide a means of escape.

A well designed timber fire door will delay the spread of fire and smoke without causing too much hindrance to the movement of people and goods. Different parts of a building may be separated from each other, into compartments of a fire-resisting construction. Any openings leading from them will have fire doors to maintain an effective fire barrier and should prevent excessive transmission of products of combustion which can interfere with the safe use of escape routes.

Every fire door is therefore required to act as a barrier to the passage of smoke and/or fire to varying degrees dependent upon its location in a building and the fire hazard associated with the building.

- A fire door is to provide resistance to the passage of a well-developed fire and consequently requires intumescent strips to be installed.
- Secondly to prevent excessive quantities of cold smoke to pass in the early stages of a fire and then to provide a barrier to a well-developed fire. They need to be fitted with intumescent strips and cold smoke seals to achieve this aim.

Identifying Fire Doors

Certified Fire Doors

Manufacturers can certify fire door sets so they are easily identified and with a guarantee to behave in a fire as they should. The first step for the manufacturer is to construct a fire door set designed to a specification that in the opinion of the manufacturer will resist a fire for a specified time. This door set is then tested by an approved fire testing centre and if it passes the test any door sets constructed to that specification can be considered for certification.
Once the certification is approved all similar constructed door sets are identified by labels. This will identify the manufacturer, the date of manufacture and the design fire rating of the door type. They may fit a colour coded plug instead of or in addition to the label. Identification labels are usually fitted on the top edge of the door and plugs inserted in the jamb of the door

(Please see website for examples of labels etc.)

Nominal Fire Doors

Nominal fire doors are doors that are not certified but in the opinion of an assessor will hold back a fire for a specified period of time. Identifying nominal fire doors is very difficult but there are a number of clues that may indicate the door is a nominal fire door.
All dedicated fire doors providing a half hour or greater performance are usually fitted with intumescent seals. These may be encased in a PVC sheath, of any colour, which may also hold a blade or brush seal for smoke sealing purposes. These seals are fitted in the door leaf edges or the frame to seal the head and long edges of the assembly. A door may be fitted with a concealed intumescent system where the long edge sealing is housed under lipping’s. Intumescent seals will be visible at the head of the door. Doors 44mm thick fitted with 10-15mm wide intumescent seals are likely to be FD3O and doors 54mm thick using at least 20mm width of intumescent seal, fitted as one or two strips are likely to be FD6O.

Fire doors with a rating in excess of FD6O are rarely used on escape routes or to protect people but may be found where property protection is important e.g. data storage areas where documents cannot be removed in the event of fire. Some of these doors have the appearance of timber, but may be constructed with a mineral core. Expert assistance may be required to identify such door sets.

Fire door jambs need to be over 25mm wide.

Older panel doors, especially if less than 44mm thick, are unlikely to be FD30 however they could have been upgraded or modified to achieve a fire resisting standard. These days you might find certified panelled fire doors with wood surfaces to fit into traditional homes.

Hollow flush doors using egg box or similar construction will not be FD30. This can be detected by the weight of the door because fire doors are much heavier than a hollow door. To check the weight of a door, instead of removing it, you can detach the self-closer and swing the door between you thumb and index finger this gives a good indication of the weight of the door. Hollow doors are reasonable easy to detect using this method.

Fire doors will have door closers fitted. Spring-loaded self-closing hinges and concealed Perko door closers with chains might have been utilised.

Because of the weight of a fire door and to prevent it warping, fire doors are usually fitted with three fire door hinges. However the current BS EN standard does allow two hinges in certain circumstances. There may be documentation that was supplied with a fire door giving you all the necessary information. Unfortunately, there is no standard method of identifying fire doors other than the Q-Mark or the Certified fire door schemes therefore insisting on written proof that a door meets all the necessary standards, for example a test certificate, might still be necessary.

Source: http://www.firesafe.org.uk