



## Lift & Escalator Owner News

### Subject: Smoke resistant lift landing doors

To meet building regulations guidance (such as Approved Document B) and British Standards (such as BS 9991 and BS 9999) for the spread of fire via a lift well, those responsible for building design and construction typically specify lift landing entrances to BS EN 81-58 with a minimum fire resistance (expressed as “E” for integrity and a time in minutes – such as “E30”, “E60” etc). Building regulation guidance and British Standards do not require lift landing doors to have a rating for smoke resistance as they would typically open into a fire protected lobby/ corridor. Consequently, there are no standards for lift doors for smoke resistance.

We have seen cases where fire resistant lift landing doors have been specified with smoke resistance (typically with the addition of smoke seals tested to either BS 476-31.1 or BS EN 1634-3) without a fire protected lobby/corridor in front of the lift landing doors. We are very concerned about the fire/building safety implications of this which include the following.

- There is no requirement to fire test lift landing doors with smoke seals fitted so the addition of any smoke seals, unless covered in the EN 81-58 test report/certificate, might affect the tested performance and invalidate the certification.
- Lift landing doors are designed for repeated open/close cycles and have permitted clearances which take account of the effects of wear. It is impractical for a lift landing door to achieve any smoke resistance tested performance in all of these conditions or over the life of the door.
- Any smoke seals used on lift landing doors may age/degrade/wear over time, need replacing and can affect landing door operation adversely if not maintained.
- A protected lobby prevents excessive temperature and smoke build-up on the landing side of lift landing doors and so minimises the risk of lift parts being heated to the point that they may combust.
- Fire protected lobbies/corridors are required for evacuation lifts and firefighters lifts. Not having protected lobbies/corridors would prevent a lift from being specified as an evacuation lift or firefighters lift and from ever being improved to provide these.
- Passenger lifts with a fire recall signal from a fire alarm and detection system typically recall to the exit floor and are removed from service with the **doors parked open**, thus negating any smoke resistant measures which may have been fitted.
- Passenger lifts with no fire recall signal (e.g. from a fire detection and alarm system) continue in operation and so would allow any smoke present on landings into the lift car and lift well.
- When lift landing doors with smoke seals need to be replaced, careful consideration would be needed to achieve an equivalent level of fire and smoke resistance.

We would argue that the use of such smoke resistant measures on lift doors is a relatively new “innovation” which does not achieve an equivalent level of safety as the traditional solution with fire protected lift lobbies/corridors. The use of lobbies/corridors is an effective design solution which should not be substituted with an inferior solution.