

SINGAPORE CIVIL DEFENCE FORCE

Our Ref. : CD/FSSD/12/02/03/01

Your Ref :

Date : 10 Sep 2012



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Registrar, Board of Architects (BOA)
Registrar, Professional Engineers Board (PEB)
President, Singapore Institute of Architects (SIA)
President, Institution of Engineers, Singapore (IES)
President, Association of Consulting Engineers, Singapore (ACES)

Dear Sir/Mdm,

AMENDMENTS TO THE FIRE CODE: FIRE SAFETY REQUIREMENTS FOR THE USE OF FIRE SHUTTERS IN BUILDINGS

There has been an increasing use of fire shutters as a means to comply with fire compartmentation requirement in the Fire Code. In view of this development, the Fire Code Review Committee had conducted a review with the purpose of stipulating the conditions for its use.

2. These conditions are set out in new clauses 3.7.7 to 3.7.10 of the Fire Code. **Annex A** shows the reprint of the relevant pages of the Fire Code incorporating these clauses.
3. The circular shall take effect from the date of this circular i.e. any plan of fire safety works submitted to SCDF from this date shall comply with this requirement.
4. Please convey the contents of this circular to members of your Institution / Association / Board. The circular is also available in CORENET-e-Info: <http://www.corenet.gov.sg/einfo>.
5. For any inquiry or clarification, please contact Mr Pang Tong Teck (SCDF) at Tel: 68481403 or E-mail: Pang_Tong_Teck@scdf.gov.sg.

Yours faithfully,
(transmitted via e-mail)
Maj Lee Kok Chuen
Secretary, FSSD Standing Committee
for Commissioner
Singapore Civil Defence Force

cc
All members of FSSD Standing Committee
President, REDAS
President, IFE

President, SISV
CEO, BCA
CEO, URA
CEO, HDB
CEO, PSA
CEO, JTC
CE, LTA
CE, TUV SUD PSB – (Attn: Ms Emily Mok/ Mr Joseph Chng)
CE, SPRING Singapore – (Attn: Mr Kenneth Lim)
President, FSMAS
Honorary Secretary, SPM

- 3.7.7 Fire shutter is permitted to be used as compartment wall except for fire compartmentation of fire command centre and means of escape which include exit staircase, smoke-stop lobby/fire-fighting lobby, internal exit passageway, etc. Use of fire shutter
- 3.7.8 The fire shutters, which are used to protect openings in compartment wall/floor, shall have the necessary fire resistance including thermal insulation, not be less than that of the compartment wall/floor. However, fire shutters, which are installed at the edge of atria, voids such as escalator void areas and between floors and door way, need not have thermal insulation.
- 3.7.9 The commonly used shutters such as vertical, horizontal and lateral fire shutters shall comply with SS 489 and the following:
- (a) For vertical fire shutter operated by gravity during fire condition:
- Upon activation by fire alarm system or fusible link, the operating mechanism of curtains/leaves of vertical fire shutter shall be released. The curtain/leaves shall descend under gravity at a controlled rate.
- (b) For electrically operated vertical, lateral and horizontal fire shutter (no fusible link is required):
- Upon activation by fire alarm system, the electrical motor shall drive the curtains/leaves to descend and shall be backed up by emergency power supply. The power and signal cables shall be fire-rated.
- 3.7.10 The mode of activation for fire shutters at different locations shall be as follow:
- (a) Fire shutters as separating wall between two buildings:
- (i) Two buildings separated by a common fire shutter:
- For vertical fire shutter operated by gravity and electrically operated fire shutters, it shall be linked to fire alarm systems of both buildings and shall be activated by fire alarm system of either building. Mode of activation by fusible link only is not permitted.
- (ii) Two buildings separated by two separate fire shutters:
- For vertical fire shutter operated by gravity and electrically operated fire shutters, each fire shutter shall be activated by the fire alarm system of its own building.

Mode of activation by fusible link only is not permitted.

- (b) Fire shutters as compartment wall/floor for limiting compartment area and cubical extent, as compartment between different purpose groups, as compartment of special rooms such as kitchen, electrical room, store room, etc. and as compartment of basement passenger/goods lift lobby:
 - (i) For vertical fire shutter operated by gravity, mode of activation by fusible link is acceptable.
 - (ii) For electrically operated fire shutter, mode of activation shall be by local smoke detectors.

- (c) Fire shutters as compartmentation at atrium/voids or between floors (being part of the engineered smoke control design):
 - (i) Only electrically operated fire shutter is permitted. Signal to operate the respective fire shutter shall be from dedicated smoke detector installed at the respective smoke zone.
 - (ii) Vertical fire shutter operated by gravity activated by fusible link is not permitted.