消防事務處
防火組
香港軒尼詩道壹號照信箱
第20192號郵箱

FIRE PREVENTION BUREAU,
FIRE SERVICES DEPARTMENT,
ASIAN HOUSE,
1, HENNESSY ROAD, HONG KONG
P. O. BOX NO. 20192.

本處檔號 OUR REF.

來函檔號 YOUR REF.

電話 TEL NO.

All Registered Ventilation Contractors
Electrical and Mechanical Consultants
All Authorised Persons - Architects
Technical Secretary P.W.D. (20 copies)
Director of Urban Services
Secretary, Urban Council

Ventilation Circular Letters - F.S.D.

Ventilation Circular Letters have been issued by the Fire Services Department since 1971 to assist Ventilation Contractors, Authorised Persons, etc., in conforming with the minimum fire safety precautions and requirements considered necessary by this Department to prevent the spread of fire through any system falling within the scope of the legislation.

2. They are not intended to impose unnecessary restrictions on design and installations or on the use of new materials used in the manufacture of any component part of a system, and responsible and constructive suggestions on these aspects will always be considered.

3. Information contained in the Circular has now been consolidated into the present format, (copy attached) which it is hoped you will find more convenient.

4. In future all information requiring circulation will be issued to this format and revisions/amendments will be made by one of the following methods:-

(i) The issue of numbered amendment(s) contained in the form of a "tearoff" slip which will be pasted over the paragraph(s) which it amends.

(ii) The complete re-issue of the page(s) affected.

(iii) The complete re-issue of the whole part.

5. All Ventilation Circular Letters previously issued will be cancelled with effect from the date of this letter.

Yours faithfully,

(M.K. Lane)
for Director of Fire Services

6th January, 1975

REF. NUMBER AND DATE SHOULD BE QUOTED IN REFERENCE TO THIS LETTER

MKL:BGF:tsf 凡提及本信時請引述編號及日期

Circular Letters - Index of Contents

Circular No. V1

Electric Heating Elements Used In Ventilation Installations

1.1. Duct Heater Assemblies

1.1.1. Heating elements shall be evenly spaced and occupy the cross sectional area of the duct at the point where the duct heater is installed.

1.1.2. Heating elements shall be sheathed and of 'black' heat type, surface temperature of which shall not exceed 500°F is still air.

1.1.3. An external terminal box shall be provided for all connections.

1.1.4. Internal wiring shall be carried out in cable as used in high temperature work.

1.1.5. Internal insulation for either acoustic or thermal reasons shall not be permitted within 1.0 metre of the duct heater unless, in the case of package units, designed for this use.

1.1.6. Fire resisting hinged access door(s) shall be provided at the duct heater for maintenance and cleaning purposes.

1.2. Line, Control and Sequence Interlocking

1.2.1. The blower fan motor shall be controlled by a contractor starter complete with overload protection device, stop/start push buttons, auxiliary switches, terminals for sequence interlocking and incorporate a time delay device.

1.2.2. The heater(s) shall be controlled by a contactor(s) and, step controller if required by design considerations, fully interlocked with 1.2.1. above and 1.2.3. below.

1.2.3. A sail switch and an overheat thermostat, duct type with fail safe feature and manual reset, shall be provided and connected in series with the heating contactor coil circuit. The overheat thermostat shall operate at 50°C ± 10%, and within 90 seconds of reaching this temperature.

1.2.4. A summer/winter switching arrangement is permissible providing the timer cannot be defeated when either heating or reheat facilities are provided.

1.2.5. An interlock defeat is permitted subject to use by Authorised personnel only.

1.2.6. An emergency stop push button shall be provided for and adjacent to the blower fan motor and shall be so connected as to defeat the time escapement delay.

/1.2.7. ....

M K Lane.

(M.K. Lane)
for Director of Fire Services

6th January, 1975

1.2.7. Control circuit voltages shall not exceed 200 volts.

1.2.8. The intended function of the timer is that, on depressing the stop push button, the heater contactor coil is open circuited but the blower fan motor continues to run for not less than three minutes to dissipate residual heat.

1.3. Fan Coil Unit Installation

1.3.1. These may be exempted, where direct driven, from this specification where winter heating and reheat elements do not exceed a total rating of 2000 WATTS. The elements are of course required to be interlocked with the blower fan motor and protected by an overheat thermostat having operating characteristics as defined in line, control and sequence interlocking, Paragraph 1.2.3.

M K Lane

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V2

Fire Dampers

1.1. For any duct passing through any floor or ceiling, requiring the provision of a fire damper, with the meaning of the Building (Ventilating Systems) Regulations, fire dampers shall be constructed from not less than 6 mm mild steel. The associated casing shall also be constructed to this standard.

1.2. For any duct passing through any wall requiring the provision of a fire damper, within the meaning of the Building (Ventilating Systems) Regulations, fire dampers shall be constructed from not less than 3 mm mild steel. The associated casing shall also be constructed to this standard.

1.3. In the case of floor, wall or ceiling transfer openings, they shall be protected as required in paragraphs 1.1. and 1.2. above.

1.4. 6 mm mild steel shall be deemed the maximum metal gauge necessary for the construction of fire dampers or associated casings.

1.5. Angle iron shall be employed in the construction to permit clearance and to prevent deforming or jamming of the fire damper.

1.6. Brass bearings shall be used for the fire damper assembly.

1.7. The fire damper casing shall be securely bolted to the structure through which the duct penetrates.

1.8. In addition to the normal type of simple drop damper as specified above, other types of fire dampers approved by recognised testing authorities may be submitted for approval by Director of Fire Services provided the fire damper possesses a rating which may be equated with the fire resistance of the structure it protects. Appendix I lists dampers which have been so approved.

1.9. All fire dampers shall be subject to the approval of the Director of Fire Services.

M. K. Lane.

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Appendix I to Circular No. V2

List of Fire Dampers approved by the Director of Fire Services

(Paragraph 1-8 of Fire Services Circular No. V2 refers)

1. Fire Foil Damper Co. Ltd., Tonge Mill, Tonge, Sittingbowne, Kent, ME 9 9AP	Fire Dampers manufactured and constructed in accordance with, and satisfying the requirements of, B.S. 476, Part 8, 1972 and in respect of which specific approval from a recognised testing authority has been obtained.
2. Air Balance Incorporated, Chicago, Illinois, U.S.A.	(a) Fire Dampers manufactured and constructed in accordance with, and satisfying the requirement of, B.S. 476, Part 8, 1972 and in respect of which specific approval from a recognised testing authority has been obtained. (b) Fire Dampers manufactured and constructed in accordance with, and satisfying the requirements of U.L. 10(b) (NFPA 252 ASTM E152) and in respect of which specific approval from Underwriters' Laboratories, U.S.A. has been obtained.

M.K. Lane

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V3

The Use of False Ceilings as Air Ducts

1.1. Existing installations using non combustible false ceilings as a duct may be permitted to remain as such.

1.2. Existing installations using combustible false ceilings as a duct may not be approved under these Regulations.

1.3. With immediate effect, any requirement served in respect of 1.2. above, shall be interpretated as meaning the provision of a galvanized iron sheet metal duct for the system.

1.4. New Installations

1.4.1. Proposed installations and those currently being installed shall not receive approval to use the false ceiling, even when non combustible, as an air duct for Fresh air, Discharge, Return or Exhaust air purposes.

1.5. Exceptions

1.5.1. Ventilated ceiling approved by recognised testing authorities and specially designed for this purpose. The false ceiling may not be used to contain other normal and essential services unless prior approval is given.

1.5.2. All electric wiring in these circumstances must be contained in cable ducts and/or screwed metal conduit.

M.K. Lane

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No V4

Insulation for use with duct work or pipe work

1.1. Where a duct passes through a structure and is provided with a fire damper, the external insulation is required to have a fire resistance equal to the structure through which the duct passes.

1.2. Insulation for chilled water pipelines and condensate drains shall have a fire resistance equal to the structure through which the pipeline passes.

1.3. It should be noted that Polystyrene insulation does not satisfy requirements at 1.1. and 1.2. above. However, there are no objections to the continued use of Polystyrene or any other type of insulation for 'normal' purposes where no fire resistance is required.

1.4. It should also be noted that the authority in respect of fire resistance is the Building Authority.

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V5

Structural Ducts

1.1. Structural ducts in buildings are primarily designed to accommodate various services and, many air conditioning installations utilize them as fresh air or exhaust ducts.

1.2. Structural ducts have a designed fire resistance and, under these re regulations, fire dampers are required at the point where the structural duct is broken.

1.3. Openings not exceeding 20 square inches in free area, per room, in any structural duct, are not required to be fitted with fire dampers and fusible links provided that fire dampers and fusible links are fitted to ensure separation between floors.

M K Lane.

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V6

P.V.C. Piping

1.1. P.V.C. piping may not be used, for any installation, unless it is wholly contained within a given compartment or installed to the satisfaction of the Building Authority.

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V7

Air Conditioning Layout Design

1.1. Protected areas in buildings are essentially those which are required, by law, to be separate compartments relative to the usable area of the premises.

1.2. These areas are provided for the occupants, as means of safe egress from the building in the event of fire and not to accommodate services required for the building.

1.3. Submissions showing ducts, pipes etc., passing through these areas shall not be approved and where they are found installed will be required to be removed under Section 9 of the Fire Services Ordinance.

1.4. Electric Switchgear

1.4.1. In no circumstances shall electrical switchgear be installed in designated protected areas.

M.K. Lane

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V8

Installation of P.V.C. Insulated Cables in Low Temperature Areas

1.1. In accordance with Section E7 of the Regulations for The Electrical Equipment of Buildings of the Institution of Electrical Engineers, cables insulated and/or sheathed with general purpose P.V.C. shall not be installed in refrigerated spaces or other situation where the temperature is consistently below $0^{\circ}C$.

M K Lane

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V9

Certificates

1.1. Upon the issue of a certificate, from a registered ventilation contractor, the Director of Fire Services will be satisfied that the installation is in safe and efficient working order where the following items have been completed:-

1.2. Fire Dampers

1.2.1. Every fire damper assembly shall be wire brushed to remove any accumulation of rust or foreign matter.

1.2.2. Every fire damper assembly shall receive at least one coat of rust proofing paint.

1.2.3. Every fire damper bearing assembly shall be cleaned and receive a fresh charge of grease.

1.2.4. Every fire damper shall be checked, with the blower fan running, to ensure that the damper operates correctly and remains firmly seated in the close position.

1.2.5. Fusible links shall be replaced as required.

1.2.6. Where a required fire damper has been removed, for any reason, a replacement shall be fitted.

1.3. Air Filters

1.3.1. If disposable type and dirty they shall be replaced.

1.3.2. If cleanable type they shall be cleaned prior to the issue of the certificate.

1.3.3. Where air filters have been removed or discarded, for any reason, replacements shall be fitted.

1.3.4. An air filter shall be deemed to be dirty where an increase of 0.3" S.W.G. is recorded over the new and clean condition.

M.K. Lane

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V10

Annual Certification of Ventilating Systems

1.1. The following procedure shall be followed when issuing annual certificates:-

1.1.1. The correct ordinance (heading) should read "The Building (Ventilating Systems) Regulations

OR

1.1.2. Where a certificate is issued in respect of Restaurants, Theatres, Cinemas and Dancing Establishments, the correct ordinance (heading) is:-

"The Public Health & Urban Services Ordinance Part VIII 'Scheduled Premises'".

1.2. Existing Certificate Forms

1.2.1. There is no objection to the continued use of existing certificate forms but when these have been exhausted 1.1.1. and 1.1.2. above, must be observed.

1.2.2. When ordering new certificates, if a tear-off slip bearing the name and address of the customer is provided, this will be forwarded as Fire Services Department acknowledgement.

1.2.3. The wording on the tear-off slip shall read:-

"I acknowledge with thanks receipt of the copy of a certificate dated ....., issued by the registered ventilation contractor appointed by you to inspect the ventilating system installed in these premises."

M K Lane.

(M.K. Lane)
for Director of Fire Services

6th January, 1975

Circular No. V11

Air Ducts

1.1. Regulation 4(1)(e) of the Building (Ventilating Systems) Regulations lays down specific requirements for air ducts used in any system controlled by these regulations.

1.2. It has, for some considerable time, generally been assumed that galvanized sheet metal was the only suitable material which would satisfy all aspects of the regulations. Perhaps this assumption remains basically true today but modern techniques have produced lighter and cheaper materials which have been introduced for the manufacture of air ducts.

1.3. Not all materials are in fact suitable, as far as the law is concerned, but many are and, in this respect, aluminium is acceptable subject to the duct being so designed and constructed as to bear the weight of any person who may enter the duct and where it is of such dimensions as to permit this.

1.4. To avoid any difference of opinion in this respect, it shall be deemed from the date of this circular that, where the dimension at any part on a horizontal and a vertical side exceeds 500 mm respectively, it shall be constructed to bear the weight of any person who may be required to enter. To qualify 'at any part', branch ducts would not require such strengthening where the main duct exceeds 500 mm and the branch duct does not exceed this dimension.

1.5. 'Fiberglass' ducts having Underwriter's Laboratory Class I label and satisfying the National Fire Protection Association standard No. 90A are also approved subject to the conditions at paragraph 1.4 being complied with.

1.6. Should you propose the use of any other material for the construction of air ducts you are advised to seek early approval from this Department certainly before ordering or manufacturing.

M K Lane.

(M.K. Lane)
for Director of Fire Services

6th January, 1975