class divisions, without serving those spaces, provided those ducts have the same fire integrity as the divisions which they pierce.

(5) Ducts provided for the ventilation of machinery spaces of category A, galleys, car deck spaces, ro-ro cargo spaces or special category spaces shall not pass through accommodation spaces, service spaces or control stations unless they comply with the conditions specified in subparagraphs (a)(i) to (a)(iv) or (b)(i) and (b)(ii) below:

(a)(i) the ducts are constructed of steel having a thickness of at least 3mm and 5mm for ducts the widths or diameters of which are up to and including 300mm and 760mm and over respectively and, in the case of such ducts, the widths or diameters of which are between 300mm and 760mm having a thickness to be obtained by interpolation;

(ii) the ducts are suitably supported and stiffened;

(iii) the ducts are fitted with automatic fire dampers close to the boundaries penetrated; and

(iv) the ducts are insulated to "A-60" standard from the machinery spaces, galleys, car deck spaces, ro-ro cargo spaces or special category spaces to a point at least 5m beyond each fire damper;

or

(b)(i) the ducts are constructed of steel in accordance with sub-clause (5)(a)(i) and (5)(a)(ii) of this clause, and

(ii) the ducts are insulated to "A-60" standard throughout the accommodation spaces, service spaces or control stations;

except that penetrations of main zone divisions shall also comply with the requirements of sub-clause (10) of this clause.

(6) Ducts provided for ventilation to accommodation spaces, service spaces or control stations shall not pass through machinery spaces of category A, galleys, car deck spaces, ro-ro cargo spaces or special category spaces unless they comply with the conditions specified in subparagraphs (a)(i) to (a)(iii) or (b)(i) and (b)(ii) below:

(a)(i) the ducts where they pass through a machinery space of category A, galley, car deck space, ro-ro cargo space or special category space are constructed of steel in accordance with sub-clauses (5)(a)(i)) and (5)(a)(ii) of this clause.

(ii) automatic fire dampers are fitted close to the boundaries penetrated; and

(iii) the integrity of the machinery space, galley, car deck space, ro-ro cargo space or special category space boundaries is maintained at the penetrations;

or

(b)(i) the ducts where they pass through a machinery space of category A, galley, car deck space, ro-ro cargo space or special category space are constructed of steel in accordance with sub-clauses (5)(a)(i) and (5)(a)(ii); of this clause and

(ii) the ducts are insulated to "A-60" standard within the machinery space, galley, car deck space, ro-ro cargo space or special category space;

except that penetrations of main zone divisions shall also comply with the requirements of sub-clause (10) of this clause.

(7) Ventilation ducts with a free cross-sectional area exceeding 0.02m² passing through "B" class bulkheads shall be lined with steel sheet sleeves of 900mm in length divided preferably into 450mm on each side of the bulkheads unless the duct is of steel for this length.

(8) Such measures as are practicable shall be taken in respect of control stations outside machinery spaces in order to ensure that ventilation, visibility and freedom from smoke are maintained, so that in the event of fire the machinery and equipment contained therein may be supervised and continue to function effectively. Alternative and separate means of air supply shall be provided; air inlets of the two sources of supply shall be so disposed that the risk of both inlets drawing in smoke simultaneously is minimised. At the discretion of the Chief Surveyor, such requirements need not apply to control stations situated on, and opening on to, an open deck, or where local closing arrangements would be equally effective.

(9) Where they pass through accommodation spaces or spaces containing combustible materials, the exhaust ducts from galley ranges shall be constructed of "A" class divisions. Each exhaust duct shall be fitted with:

(a) a grease trap readily removable for cleaning;

(b) a fire damper located in the lower end of the duct;

(c) arrangements, operable from within the galley, for shutting off the exhaust fans; and

(d) fixed means for extinguishing a fire within the duct.

(10) Where it is necessary that a ventilation duct passes through a main vertical zone division, a fail-safe automatic closing fire damper shall be fitted adjacent to the division. The damper shall also be capable of being manually closed from each side of the division. The operating position shall be readily accessible and be marked in red light-reflecting colour. The duct between the division and the damper shall be of steel or other equivalent material and, if necessary, insulated to comply with the requirements of clause 105(1) of this Code. The damper shall be fitted on at least one side of the division with a visible indicator showing whether the damper is in the open position.

(11) The main inlets and outlets of all ventilation systems shall be capable of being closed from outside the spaces being ventilated.

(12) Where a stairway enclosure is ventilated, the duct or ducts shall be taken from the fan room independently of other ducts in the ventilation system and shall not serve any other space.

(13) All power ventilation, except machinery space and cargo space ventilation and any alternative system which may be required under subclause (8) of this clause, shall be fitted with controls so grouped that all fans may be stopped from either of two separate positions which shall be situated as far apart as practicable. Controls provided for the power ventilation serving machinery spaces shall also be grouped so as to be operable from two positions, one of which shall be outside such spaces. Fans serving power ventilation systems to cargo spaces shall be capable of being stopped from a safe position outside such spaces.

78. Ventilation Systems in Passenger Ships Carrying Not More than 36 Passengers—(1) The ventilation system of a passenger ship carrying not more than 36 passengers shall, in addition to this clause, also be in compliance with the requirements of clause 77, subclauses (4) to (11) of this Code.

(2) Ventilation ducts shall be of non-combustible material. Short ducts, however, not generally exceeding 2m in length and with a cross-section not exceeding 0.02m² need not be non-combustible, subject to the following conditions:

(a) these ducts shall be of a material which, in the opinion of the Chief Surveyor, has a low fire risk;

(b) they may only be used at the end of the ventilation device;

(c) they shall not be situated less than 600mm, measured along the duct, from an opening in an "A" or "B" class division including continuous "B" class ceilings.

(3) Power ventilation of accommodation spaces, service spaces, cargo spaces, control stations and machinery spaces shall be capable of being stopped from an easily accessible position outside the space being served. This position should not be readily cut off in the event of a fire in the spaces served.