CHAPTER 3

MISCELLANEOUS

3.1 Approved Equipment

3.1.1 Regulation 36 requires that certain equipment fitted on board ship is of an approved type. i.e. items of equipment such as floor coverings, sidescuttles and windows, vacuum discharge pipe systems, thermostatic mixing valves, and plant used to produce drinking/fresh water are now permitted to be type approved by Nominated Bodies as defined in Merchant Shipping Notice No. M.1645, and as so authorised by the MCA.

3.1.2 Reference may be made to MCA's list of that equipment which has successfully secured type approval.

3.2 Rodent and Vermin Control

The standard reference is 'Guide to Ship Sanitation' published by the World Health Organisation (WHO), reprinted with an amendment in 1987.

3.2.1 General

3.2.1.1 Rodents in a vessel are a menace to health, and uneconomic. It is therefore important that every endeavour should be made to render their existence as difficult as possible.

3.2.1.2 They are very prolific in their breeding habits and their numbers can increase daily. They dislike open spaces and thrive in dark corners or secluded spaces which are not easily accessible. If, therefore, during the construction of the crew accommodation potential nesting spaces and runs can be eliminated this will go a long way towards keeping a ship rodent free and will reduce the cost and delay of periodic fumigation. It is important to realise that a small rodent can pass through small holes; they will not gnaw a flat surface, but will generally attack corners and edges of timber. Any gratings or wire mesh used to close off spaces should have apertures no larger than 9 millimetres.

3.2.1.3 It is appreciated that in the construction of crew accommodation it is sometimes difficult to avoid corners or pockets but by exercising care much can be done to minimise the condition favourable to harbouring and nesting and hence make the life of a rodent as difficult as possible.

3.2.2 Bulkheads

3.2.2.1 Each compartment or group of compartments should, as far as possible, be isolated as a rodent proof space by effectively closing all openings into adjacent compartments; by this means runs will be avoided. All necessary openings such as ventilation ducts should be screened at the bulkhead if no mesh is fitted at the apertures.

3.2.2.2 If bulkheads or partitions with ventilation openings at the top form the boundaries of a compartment or group of compartments, the openings should be closed by wire mesh or expanded metal.

3.2.3 Pipes and cables

As far as possible pipe lines should be spaced with not less than 50 millimetres between them after allowance for lagging. They should not be fitted close to a beam flange which might form a secluded shelf. In arranging pipes and cables care should be taken that the effective clear headroom as specified in the Regulations is not reduced. Where pipes pass through non-watertight bulkheads they should be fitted with collars of either solid steel or wire mesh when not required by these or other Regulations to be provided with other means of closure. Collars should be close fitting and well secured. The protection of casings fitted around cables and the like should be effectively sealed.

3.2.4 Linings

Linings should preferably be fitted close to decks and bulkheads, but if not they should be effectively sealed in such a manner that they do not leave accessible void spaces or present gnawing edges.

3.2.5 Furniture

Furniture should be fitted either close against bulkheads and decks or else provided with sufficient space to permit visual inspection. Loose gratings and false bottoms should be avoided.

3.2.6 ***Dry provision store rooms***

Too much attention cannot be given to these spaces for it is here that rodents look for food. The boundary bulkheads of dry provision store rooms should be of steel except that bulkheads separating one dry provision storeroom from another may be constructed of wire mesh. The apertures in wire mesh should not exceed 9 millimetres. Doors should be close fitting with suitable stops to prevent rodent entry. All bins should be fitted close against the bulkheads or else far enough away to permit visual inspection. Loose gratings are not to be fitted on the floors. The shelves should be of open spaced battens and not of excessive width. If the upper half of the door is intended to be left open for ventilation purposes a closely fitted grating door should be arranged.

3.2.7 Fresh water and drinking water tanks

Fresh water and drinking water gravity or service tanks should be so fitted as to provide visual inspection on all sides in addition to the tops and bottoms.

3.2.8 Galleys

The same precautions in respect of bulkheads, bins, lockers, etc. to those specified for dry provision store rooms in paragraph 3.2.6 apply.

3.2.9 Washplaces, bathrooms and water closets

In these spaces only open plumbing should be installed, i.e. pipes should not be boxed in.

3.2.10 Ventilation inlets and outlets

Ventilation inlets and outlets to the open air should be provided with wire mesh the apertures of which do not exceed 9 millimetres.

3.2.11 Casings

All casings to telegraph wires, cables, telemotor pipes or any other leads which require protection should be entirely enclosed.

3.3 Liquefied Petroleum Gas Domestic Installations

Where LPG domestic installations are provided for cooking purposes, heating, lighting, refrigeration and for the production of hot water, or where the MCA permits the use of such installations by an exemption from a specific requirement of a regulation, the arrangements are to be strictly in accordance with the latest relevant International/British standards. In addition the surveyor will need to take into account requirements specified in the relevant Merchant Shipping (Fire Protection) Regulations.

The surveyor should check that all controls and alarms are fully operational.

3.4 Dry Cleaning Plants

3.4.1 General

Although dry cleaning plants are not required by the Regulation to be provided, where such plants are fitted they should comply with the latest standards and these Instructions and any relevant Marine Guidance Notes. Only the installation aspects are covered below and it is relevant to note that the requirements outlined are on the assumption that halogenated solvents, which are non-flammable, are to be used in the plant.

3.4.2 Hazards

The principal hazards are associated with the solvents used for dry cleaning. For the ready reference of all concerned with the effective installation of dry cleaning plants with a view to limiting the risk to personnel onboard and to operators of such plants many of the hazards are listed as follows:-

3.4.2.1 the principal hazards associated with dry-cleaning solvent are that it is volatile and the vapour is an anaesthetic. The vapour is capable of inducing drowsiness, followed by unconsciousness and eventually death if the vapour concentration is high enough and the affected person is not quickly removed to fresh air. It is therefore important that effective mechanical ventilation is provided in any compartment containing dry-cleaning plant. The purpose of such ventilation and the following requirements is to ensure that the vapour concentration never exceeds the 'threshold limit value' which is the airborne concentration of vapour under which it is believed that nearly all persons may be repeatedly exposed without adverse affects;

3.4.2.2 the vapour, if allowed to contact naked flames or red-hot surfaces, decomposes into toxic and corrosive substances which are dangerous to both health and structure. Smoking should therefore be prohibited in compartments where the solvent is present;

3.4.2.3 the solvent, if handled without protective clothing, is a potential cause of de-fatting of the skin, leading to skin cracking with the possibility of infection from other sources; and

3.4.2.4 the vapour is heavier than air, and may therefore build up in the bottom of a compartment in the absence of air currents.

3.4.3 Position and access

3.4.3.1 The plant and associated compartments should be:-

(i) positioned wherever practical with an entrance from the open deck;

(ii) arranged such that there is no direct communication with crew or passenger accommodation or passageways directly leading thereto;

(iii) totally separated from other enclosed spaces by steel gastight divisions;

(iv) not used for any other purposes than dry cleaning; and

(v) fitted with access doors having sills of 150 millimetre minimum height.

3.4.4 Ventilation

3.4.4.1 A mechanical exhaust fan providing at least 20 changes of air per hour should be fitted to the plant compartment, separate from all other ventilation systems and exhausting to a position in the open air, clear of other accesses, ventilation or window/sidelight openings. The trunk within the compartment is to be equally divided to draw air from:-

(i) a high level; and

(ii) a level near the deck and as close as possible to the plant still; and so positioned that the normal flow of air is directed away from the operator, past the plant and any airing space (see paragraph 3.5.8 below) and thence outboard. If the trunking passes through other compartments then joints within those compartments should be kept to a minimum, care being taken to make them gastight.

3.4.5 Exhaust

3.4.5.1 The exhaust fan should be:

(i) positioned as close to the outboard end of the trunking as practicable, the outboard end being protected from the weather by a fixed baffle;

(ii) arranged so that in the event of stoppage of the airflow for any reason, an alarm is given inside and outside the space and the dry cleaning plant becomes inoperable except for the purge fan of the plant, which should be independently controllable; and

(iii) capable of being started at a position outside the compartment.

3.4.5.2 If high concentrations of solvent vapour may be discharged from the dry cleaning plant during the purge cycle, the purge fan of the plant should be trunked independently outboard. The same considerations as specified above should be observed for the siting of the outlet and the routing of the trunk through other compartments.

3.4.5.3 A balancing vent to atmosphere should be fitted, adequate in size and so sited and diffused that it will not 'short circuit' the main extraction system as described above. The outboard end of the balancing vent should be as remote as possible from the mechanical exhaust from the compartment and the purge outlet. Any mechanical supply ventilation should be separate from all other systems.

3.4.6 Drainage

A scupper should be fitted, led directly overboard with no connections to any other drainage system. Scuppers and drain pipes should be of solvent resistant material.

3.4.7 Water services

Any connections with the ship's fresh water system should be suitably protected against contamination by backflow.

3.4.8 Flooring

The deck of the compartment should be finished in a material which is impervious to liquids, and resistant to dry cleaning solvents. The decking should be coved up at all sides.

3.4.9 Clothes airing arrangements

3.4.9.1 It is important to provide hanging space with rails where newly cleaned articles should be thoroughly aired before being available for re-use, to remove any solvent fumes. An arrangement of airing space within the plant compartment is acceptable provided such space is adjacent to the exhaust ventilation grilles (both upper and lower), but not so close as to impede the extraction of air from the compartment.

3.4.9.2 If a separate airing room is provided then ventilation should generally be as described in paragraph 3.4.4 above, and may utilise the same trunking as the plant room.

3.4.10 Other services

3.4.10.1 Heating, lighting and heat and sound insulation should be to the standards appropriate to a laundry as specified in the Regulations.

3.4.10.2 A sensor, which activates an alarm inside and outside the space should the concentration of solvent 'vapour' in the air become unacceptable, is to be fitted in the plant and airing spaces.

3.4.11 Storage of solvents

3.4.11.1 Solvent containers should be kept in a cool place, out of direct sunlight.

3.4.11.2 No objection will be raised to the storage of three months' supply of solvent in the plant compartment. The solvent should be kept in the manufacturer's containers unless a special bulk storage tank is provided with outside filling arrangements. The manufacturer's containers are to be positively located in strong close-fitting racks to prevent displacement in rough weather, and should be kept sealed until required for use.

3.4.11.3 If larger quantities of solvent are stored onboard ship then a separate compartment should be provided and used for no other purpose. It should be positioned such that access is from an open deck with integrity, drainage, security and solvent containment arrangements as described above.

3.4.11.4 If the storage capacity either in containers or in purpose-built storage tanks is 20 gallons or more an independent mechanical exhaust ventilation system should be installed, together with a fresh air inlet. Otherwise natural ventilation may be employed comprising a supply to the top of the compartment and an exhaust as low and direct as possible, remote from other vent access openings. The access door to the compartment should in any case have the least possible sill height. A closed vessel should be provided for transferring solvent to the plant compartment.

3.4.11.5 Each storage position should be provided with a permanent notice identifying the type of solvent suitable for the dry cleaning plant, with a list of the manufacturers and trade names of suitable products. The notice should prohibit the use of other solvents in the plant.

3.4.12 Emergency equipment

An approved fire extinguisher of suitable type should be provided for use in the plant compartment, together with means of dealing with minor spillages.

3.5 Temporary Accommodation Units

3.5.1 The standard of accommodation within the unit or module together with the provision of all services should comply with the requirements of the Regulations.

3.5.2 Where it is not practical to comply with paragraph 3.5.1, the granting of exemptions may be possible giving consideration to the type of accommodation, the period of use, the intended area of service etc. as relevant.

3.5.3 A suitably protected route shall be provided between the units and the ships permanent crew accommodation facilities.

3.5.4 Other principal relevant Regulations are the appropriate Load Line and Fire Protection Regulations.

3.6 Redundant Crew Accommodation

3.6.1 Where it is proposed that the number of crew be reduced on an existing ship, resulting in the closing or change of use of accommodation spaces, it is important to ensure that the compliance with the Regulations is

maintained. Owners should submit the proposals for consideration before work commences.

3.6.2 Where changes as referred to in 6.1 above have already taken place a surveyor should survey/inspect any changes as considered relevant and advise the Master/Owner of any requirements.

3.7 Reports on Completion of Survey

3.7.1 General

Following the completion of the survey of any ship with reference to the requirements of the Regulations the surveyor should record on the particular ship's CM23/01 file his 'Completion Report'. This Report when referred to in conjunction with other minutes, correspondence and plans on the file should confirm that the duties of the MCA have been properly discharged in respect of the Regulations.

3.7.2 Format of report

The format should be such that as appropriate the following is recorded or referred to, to facilitate ready reference:-

3.7.2.1 all relevant particulars of the ship;

3.7.2.2 confirmation that the conditions of any exemptions from the Regulations which have been applied for and agreed will be complied with;

3.7.2.3 principal matters 'dealt with' during the survey;

3.7.2.4 fully document the results of any test required by the surveyor with reference to ventilation, noise, lighting, alarms, etc.;

3.7.2.5 any special features considered worthy of particular note; and

3.7.2.6 confirmation that the ship as completed complies with the Regulations, subject to any exemptions agreed as paragraph 3.7.2.2 above, and that the arrangements; materials and equipment comply with and are fitted in accordance with all relevant requirements and to the surveyors satisfaction.

3.7.3 Processing the CM 23/01 File

3.7.3.1 Where exemptions from the Regulations have been formally applied for and agreed, see paragraph 1.5 (Chapter 1 above), the file including the surveyors completion report in accordance with the above should be forwarded to Headquarters to facilitate the issue of an exemption certificate.