

## CHAPTER 2

### SUBMISSION OF PLANS AND APPROVAL OF NEW APPLIANCES AND FIRE PROTECTION MATERIALS

#### 2.1 Submission of Plans for Fire Extinguishing Arrangements

2.1.1 Plans and particulars of the fixed fire extinguishing systems for machinery and accommodation spaces for all new United Kingdom passenger ships of Classes I, II and II(A) should be submitted by surveyors to MSPP2. In addition all submissions in respect of fixed fire extinguishing systems offered as an alternative to halogenated hydrocarbon (halon) installations or for novel systems under development, which might attract special conditions of approval. Submissions should also be made when the ship is to carry dangerous goods, when the carriage of vehicles will not be in accordance with the International Maritime Dangerous Goods Code (IMDG) or Merchant Shipping Notice No. M.1433, or where unusual conditions of operation or service introduce additional hazards.

2.1.2 When a series of ships, irrespective of class or tonnage, is to be constructed surveyors dealing with subsequent ships of the series should consult as necessary to ensure uniform action.

2.1.3 Where plans and particulars are not required by the foregoing to be submitted to MSPP2 they should be approved by the nominated Lead Surveyor in the local Marine Office. The plans and particulars will not normally be given further consideration and responsibility for compliance with the regulations will rest solely with the approving officer.

2.1.4 The details to be submitted for information or approval should include:

2.1.4.1 keel laying date and where appropriate the date of conversion to a passenger ship or any major repairs, alterations and or modifications;

2.1.4.2 name of owners, class, service, type of cargo and whether the provisions of L.S. Regulation 102 or S.S. Regulation 45 are applicable; kilowatt power of main engines (if known) and kilowatt power of auxiliary engines if relevant; estimated gross tonnage and the deadweight if the ship is a tanker; the length, breadth and depth;

2.1.4.3 the general layout of the fire main; the internal diameters of the fire main, service pipes, hydrants and nozzles; the fire main isolating and relief arrangements; the position of all hydrants; the position and capacity of the main and emergency fire pumps and, for electrically driven pumps not in the main machinery space, the cable runs from the source of power and position of starting arrangements;

2.1.4.4 a general arrangement plan of the engine and boiler rooms showing the position of the oil tanks and lubricating oil tanks and their overflow pipes; oil fuel units and transfer pumps and any oil fuel levelling pipes;

2.1.4.5 particulars of the proposed fixed fire extinguishing installations for the machinery spaces showing the distribution system, the position of the controls for these installations; the arrangements for stopping purifiers and oil pressure pumps, ventilation and forced and induced draft fans; the remote means of closing oil and lubricating oil tank suction valves; position of screens and coamings provided to prevent the spread of oil and the means for closing openings to prevent admission of air;

2.1.4.6 particulars of the fixed fire extinguishing arrangements for cargo spaces, Ro-Ro vehicle deck spaces or special category spaces showing the relevant dimensions, cubic capacity and closing arrangements of each compartment to be protected; where exemption is sought from fitting such installations full particulars in support of the application including details of hatchways, ventilators, means of access and their associated closing appliances and the nature of the cargoes to be carried;

2.1.4.7 particulars of the proposed inert gas installation for cargo and slop tank protection of tankers together with a copy of the operations manual;

2.1.4.8 full details of the deck foam installation for the deck protection of tankers and chemical tankers, including the relevant characteristics of the monitors and hand applicators, or the fixed deck dry powder installation fitted to liquefied gas carriers;

2.1.4.9 particulars of the fire extinguishing arrangements for every paint and flammable liquid locker;

2.1.4.10 particulars of the fire extinguishers, miscellaneous fire fighting appliances, fire alarm or detection system or any fixed fire extinguishing arrangements whether or not required by the regulations;

2.1.4.11 in tankers, in addition to the foregoing details, the location of cargo pump rooms, precautions against oil spills; cargo pump room fire extinguishing and ventilation arrangements; cargo tank vapour venting arrangements together with their position and height of outlets above deck; and

2.1.4.12 where applicable the arrangements for helicopter landing areas and refuelling arrangements showing proposed fire fighting appliances and arrangements to contain fuel spillages. Reference should be made to Resolution A 855(20) Standards for On Board Helicopter Facilities and to "Guide to Helicopter/Ship Operations" issued by the International Chamber of Shipping.

## **2.2 General Conditions of Approval of New Appliances**

2.2.1 The general requirements for the approval of new appliances are contained in Merchant Shipping Notice No. M.1645, which sets out the procedures for type approval and certification of marine equipment. Reference should also be made to the FTP Code. Unless expressly stated otherwise, references in these Instructions to “approved” appliances shall mean equipment which has been approved by or on behalf of the MCA and for which a certificate of approval has been issued.

### 2.2.2 Fire extinguishers

The general requirements with which extinguishers must comply are contained in the Schedules 2, 3 and 4 of MSN 1665(M). These are amplified in Chapter 6 of these Instructions. All appliances forming part of the statutory requirements, whether portable or not, should be approved fire extinguishers. Fire extinguishers provided in addition to the requirements should, in general, be type approved.

### 2.2.3 Breathing apparatus and associated equipment

The general requirements with which these appliances must comply are contained in Schedule 5 of MSN 1665(M) and are amplified in Chapter 9 of these Instructions.

### 2.2.4 Protective clothing for use in fire fighting

Protective clothing supplied as part of the fireman’s outfits required by the regulations should be approved. The general requirements for protective clothing are specified in Chapter 9 of these Instructions.

### 2.2.5 Safety lamps

The general requirements to be complied with are contained in L.S. Regulation 46(1)(b)(i) and S.S. Regulation 37(1)(b)(i) respectively and are amplified in Chapter 9 of these Instructions. All safety lamps supplied to ships should be of a type suitable for use in flammable atmospheres having regard to the nature of the cargoes to be carried.

### 2.2.6 Fire hoses

The general requirements for fire hoses are contained in Chapter 5 of these Instructions.

### 2.2.7 Fixed fire extinguishing installations

Due to the difficulties associated with the survey of fixed CO<sub>2</sub> fire extinguishing installations after installation on board ship, the design of such installations or the principal components should have been assessed for type approval. New halogenated hydrocarbon (halon) fire extinguishing installations are no longer permitted on ships but existing halon fire extinguishing installations will continue to be accepted on ships provided they are approved designs and are serviced and maintained in accordance with the manufacturers instructions. This is particularly important when halon systems are designed on the modular principle i.e. when the storage containers are situated in the space to be protected.

### 2.2.8 Automatic fire alarms and fire detection systems

The general requirements to which fire detection systems should comply are contained in Schedule 5 of MSN 1666(M). Manufacturers of fire detectors, control, alarm and indicator units of such systems fitted in accordance with the statutory requirements must have their equipment type approved.

### 2.2.9 Fixed inert gas systems

The general requirements to which inert gas systems should comply are contained in Schedules 9 and 10 of MSN 1666(M). Manufacturers of such systems fitted in accordance with the statutory requirements must have their equipment type approved.

## **2.3 Structural Fire Protection Arrangements**

### 2.3.1 Requirements and advice

The statutory requirements for large passenger ships and non-passenger ships of 500 tons gross and over are set out in Parts VI, VII, and VIII of the L.S. Regulations and for small passenger ships in Part VI of the S.S. Regulations. Advice and guidance on the interpretation and application of these requirements is given in Chapters 11 to 14 of these Instructions.

### 2.3.2 Materials and fittings

When seeking approval of new materials and fittings, the following requirements should be observed:

2.3.2.1 the administrative arrangements for type approval and certification are dealt with in Merchant Shipping Notice No. M.1645;

2.3.2.2 details of the various test procedures are to be found in the FTP Code; and

2.3.2.3 whenever 'approved' materials or fittings are used in the structural fire protection arrangements of any ship, such products must be fitted/applied in strict accordance with the conditions stated in the approval certificate.

### 2.3.3 Information and plans to be submitted

Details of the of information and type of drawings to be prepared and submitted in respect of the structural fire protection arrangements are given in Chapter 11, paragraph 11.1 refers.

## **2.4 Means of Escape**

The regulations contain detailed requirements for the provision of suitable means of escape from within the accommodation, service and working spaces of all types of ship - L.S. Regulation 68, 84 and 101, and S.S. Regulation 44 refer. Advice is given and comments are made on these regulations in Chapter 15 of these Instructions.