

PART 10

MISCELLANEOUS REQUIREMENTS FOR SHIPS WITH SPECIAL CATEGORY OR RO-RO CARGO SPACES

10.1 General

Ro-Ro passenger ships require to be fitted with access opening indicator lights, supplementary emergency lighting, and TV surveillance. The requirements also apply to Ro-Ro passenger ships which are not UK ships, while they are within UK territorial waters.

10.2 Access Opening Indicator Lights (Regulation 86)

10.2.1 For ships built on or after 1st July 1997 the additional fail-safe audible alarm required should sound at the navigating bridge.

10.2.2 Position indicator switches should preferably be of the proximity type. As a minimum, the enclosure, including cable termination arrangements should provide a degree of ingress protection to IP67 as defined in British Standard BS EN 60529.

10.2.3 As far as practical, circuits should be arranged to fail safe, ie the "closed" indication should not be given upon circuit fault. Lamp test facilities should be included.

10.3 Supplementary Emergency Lighting (Regulation 87)

10.3.1 The horizontal illuminance at deck level should not be less than 0.2 lux, in the emergency mode, along escape routes from public passenger spaces and, in large public passenger spaces where the absence of adequate illumination would seriously impede escape due to the presence of furniture, glass partitions etc, for example in lounges, restaurants and bars.

10.3.2 Switches should not be installed in final sub-circuits to supplementary emergency light fittings. In cases where the ship is out of service overnight with the electrical plant shut down, the owner's proposals for safeguarding the light units from discharge should be considered.

10.3.3 It is not possible to describe in detail how the supplementary emergency lighting should be arranged having regard to the various arrangement of spaces that exist on ships. The position and spacing for a particular fitting to obtain the required illumination levels should be based upon the photometric tests made on the lighting fitting in the emergency mode on behalf of the manufacturers. Typically, a minimum illuminance of 0.2 lux can be achieved by 8 watt fluorescent fittings spaced at 10 metres or more at a height of 2.5 to 4 metres with

no reflectance from the surrounding surfaces. It will not normally be necessary to test the lighting arrangement with a light meter.

10.3.4 Illuminance may fall below 0.2 lux in way of shop counters and shops since they are not part of the escape route.

10.3.5 Supplementary emergency lighting is not necessary between doors if the second escape door can be seen when the first escape door is open.

10.3.6 The following sub-paragraphs amplify the requirements for supplementary emergency lighting equipment. Lighting fittings and associated equipment should:-

10.3.6.1 meet the requirements of the Industry Committee for Emergency Lighting Limited (ICEL) Standard 1001 Part 2 "Self-contained Luminaries and Associated Equipment", including the requirements relating to use on escape routes, except that rechargeable batteries which are rated for at least two years of normal operation are acceptable;

10.3.6.2 be certified as being in compliance with the above Standard. Equipment which is not so certified may be accepted provided the Certifying Authority is satisfied that it is of equivalent standard;

10.3.6.3 be of the self-contained type with the batteries and control equipment within the lighting fitting;

10.3.6.4 be of the maintained type;

10.3.6.5 be provided with a rechargeable battery suitable for three hours operation;

10.3.6.6 be certified for a reference ambient temperature of 40°C surrounding the enclosure;

10.3.6.7 not be provided with a switch between the battery and lamp other than the changeover device and, if required, the battery protection device;

10.3.6.8 not be influenced in the emergency mode by a fault or interruption in the supply wiring;

10.3.6.9 be provided with protection against polarity reversal and harmful complete discharge if required by the battery manufacturer;

10.3.6.10 provide a minimum degree of protection IP55 as defined in British Standard BS EN 60529;

10.3.6.11 meet the limits specified in British Standards BS 1597: 1985, "Limits and Methods of Measurement of Electro-magnetic Interference Generated by Marine Equipment and Installations";

10.3.6.12 be suitable for operation when inclined up to 90° from normal in two axes;

10.3.6.13 include facilities for simple and correct replacement of batteries, eg polarised plug and socket arrangements;

10.3.6.14 have all parts protected against corrosion and tropicalised, where appropriate;

10.3.6.15 withstand vibration test 1 in the publication "Lloyds Register's Type Approval Scheme 1985", published by Lloyds Register, 71 Fenchurch Street, London EC3M 4BS;

10.3.6.16 withstand the impact requirements specified for rough service luminaries in International Electromechanical Commission publication 598 Part I, "Luminaries General Requirement and Tests";

10.3.6.17 be suitable for operation during sustained voltage fluctuations within 10% below or 6% above the declared voltage of the system; and

10.3.6.18 be provided with special marking to indicate that the fitting is part of the supplementary emergency lighting system, e.g. two red spots.

10.3.7 Routine inspections and tests

10.3.7.1 Because of the possibility of failure of the normal lighting supply during testing of the supplementary emergency lighting system or during the subsequent re-charge period, all tests should wherever possible be undertaken at a time of minimum risk.

10.3.7.2 The routine inspections and tests detailed below should be supplemented and/or amended by any information recommended by the manufacturers for a particular installation, particularly regarding batteries. A record should be kept of any deficiencies which cannot be immediately rectified during the inspection and test. Batteries should be marked with the date of installation and this information should be recorded.

10.3.7.3 Weekly: An inspection should be made every week to ascertain that:-

- (i) any fault previously recorded has been given attention and the action noted; and
- (ii) every lamp in the system is lit.

10.3.7.4 Monthly: An inspection should be made at monthly intervals as follows:-

(i) each fitting should be energised from its battery by simulation of a failure of the supply for a period sufficient only to ensure that each lamp is illuminated;

(ii) the period of simulated failure should not exceed one-quarter of the rated duration of the lighting fitting;

(iii) during this period all lights should be examined visually to ensure that they are functioning correctly; and

(iv) at the end of this test period the supply should be restored and any indicator lamp or device checked to ensure that it is showing that the normal supply has been restored.

10.3.7.5 Annually: The monthly inspection described above should be carried out in addition to the following:-

(i) the supplementary emergency lighting installation should be tested and inspected to ascertain that it is complete, in good condition and installed in accordance with the original designs, taking into account any authorised alterations;

(ii) the battery should be replaced if the manufacturer's recommended battery life is exhausted. If not, carry out the tests below;

(iii) each fitting should be energised from its battery for a continuous period of one hour, by simulation of failure of the supply;

(iv) during this period all fittings should be examined visually to ensure that they are functioning correctly; and

(v) at the end of this test period the supply should be restored and any indicator lamp or device checked to ensure that it is showing that the normal supply has been restored.

10.3.7.6 *Portable hand lamps*

An inspection should be made at monthly intervals in accordance with a systematic schedule. Tests and battery replacement should be in accordance with the manufacturer's recommendation.

10.4 Television Surveillance and Water Leakage Detection (Regulation 89)

10.4.1 The Secretary of State may grant exemption from the requirement for TV surveillance of special category spaces or Ro-Ro cargo spaces, or from continuous patrols for Ro-Ro passenger ships on voyages exceeding 5 hours duration or which carry freight vehicles and their drivers only, providing that the vehicle spaces are thoroughly examined immediately after the loading doors are closed and thereafter on voyage at hourly intervals.

10.4.2 In cases where non-UK registered Ro-Ro passenger ships, operating from UK ports, are not fully in compliance with the requirements but are considered to meet the requirements of SOLAS Chapter II-1 Regulation 23-2 and 42-2, the details should be submitted to the Certifying Authority for consideration.

10.4.3 Side shell doors less than 2 sq.m. area may be considered too small for the application of Regulation 90(2), provided that they have sufficient freeboard and are not located in a position prone to significant wave action.