Subject :

Retroactive Application of GMDSS Radio Equipment Requirements to Existing Ships

NK TECHNICAL INFORMATION

No. : 249

Date : 25th March 1998

To shipowners and shipbuilders concerned

1. Under the 1988 Amendments to SOLAS Convention relating to GMDSS, ships constructed before 1st February 1992, and ships constructed on and after 1st February 1992 but before 1 February 1995 and not fully fitted with GMDSS radio equipment (existing ships) should comply with the requirements of GMDSS radio equipment by 1st February 1999. As less than 10 months remain until 1st February 1999, it is assumed that necessary arrangements for the fitting of GMDSS radio equipment have already been made or are being made for the ships not fitted with GMDSS radio equipment.

2. For ships where GMDSS radio equipment is being fitted on board, the Society undertakes examination and approval of drawings and documents related to the GMDSS radio equipment prior to their installation on board ships to ensure that the relevant radio survey proceeds smoothly. See NK Technical Information No.200 issued on 20th November 1996.

3. If existing ships as referred to in 1. above are scheduled to be fitted with GMDSS radio equipment, it is recommended that the drawings and documents as listed in the attachment, each in three copies (1 for the applicant, 1 for a surveying office and 1 for head office), should be submitted to Material and Equipment Department of Head Office well in advance of the date of 1st February 1999.

Attachment: List of Drawings and Documents to be Submitted

The End

Department in Charge : Material and Equipment Department
Tel : 03-5226-2020
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Attachment

List of Drawings and Documents to be Submitted for Examination/Approval

1. Specifications

A list of specifications should include the following:-

(1) Ship's flag, gross tons and date of keel laid;

(2) Ship's navigating sea area planned;

Either A1, A1+A2, A1+A2+A3 or A1+A2+A3+A4

(3) Maintenance methods selected;

Maintenance methods required vary according, amongst others, to the ship's navigating sea areas. In case where the navigating sea area is A1+A2+A3, it should be a combination of at least two methods such as "duplication of equipment", "shore-based maintenance" or "at-sea electronic maintenance".

(4) Availability of emergency sources of power for GMDSS radio equipment;

(5) Periods during which GMDSS radio equipment can be supplied from reserve sources of energy;

The required period varies from 1 hour to 6 hours, depending upon whether emergency sources of energy are available.

2. List of Equipment

A list should include kinds, types, number and manufacturers names of GMDSS radio equipment to be installed, and names of governments/organizations who have approved for the equipment

3. Arrangement of Radio Equipment

Drawings should indicate the arrangement of GMDSS radio equipment installed at the position from which the ship is normally navigated (normally, the ship's navigating bridge) or details of GMDSS communication functions available at the position. It should also indicate the locations of lighting for controllers of GMDSS radio equipment, to which the power is supplied from the emergency/reserve sources of energy.

4. Connecting Diagram of Radio Equipment

5. Arrangement of Antennas

Drawings should indicate the arrangement of all antennas viewed from the front, side

and plan if possible. When an INMARSAT SES is installed as a compulsory unit for GMDSS radio equipment and part of the ship's hull structure becomes an obstacle to the line of sight between the INMARSAT antenna and the satellite, a drawing of blind sector should be included.

6. Calculation of Battery Capacity for Reserve Source of Energy

It should be clearly indicated to which GMDSS radio equipment power is supplied from the reserve source of energy and how. For determination of the required battery capacity, reference should be made to 4.9 of the NK Guidance for Radio Installations*.

* : *4.9 Sources of Energy*

4.9.3 Reserve Sources of Energy

1 The capacity of the reserve source of energy is to be determined in accordance with the following formula with specified load conditions to the required radio installations fed from the reserve sources.

$$C = K \times I$$

where C: Required capacity (AH)

K: Capacity conversion factor (H)

(corresponding to ambient temperature of +5℃ and end voltage of 1.8V)

I: Total consumption current (A)

2 The capacity conversion factor K is to be determined in accordance with the following:

(1) For lead accumulator batteries of a clud or pasted vent type, K=3.2 in the case of a 1 hour discharging rate and K=7.2 in the case of a 6 hour discharging rates, respectively. For lead accumulator batteries of a sealed type, K=2.0 and K=7.1 in the case of 1 hour and 6 hour discharging rates, respectively.

(2) For lead accumulator batteries of other types and alkali accumulator batteries, K may be determined by referring to the value recommended by the manufacturer.