PARTE II RULES FOR THE CONSTRUCTION AND CLASSIFICATION OF SHIPS IDENTIFIED BY THEIR MISSIONS

TITLE 11 SHIPS IN GENERAL

SECTION 8 NAUTIC AND ELECTRONICS

CHAPTERS

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CHAPTER A
SCOPE

CHAPTER CONTENTS

A1. APPLICATION

100. Systems covered by this Chapter

101. The present Chapter applies to nautical and electronic systems, including navigation aids. Signals and their electronic devices.

A2. STANDARDS AND REGULATIONS

100. Industrial standards

101. Where there are no explicit regulations in these Rules, industrial standards apply, such as:

a. IEEE Standards, in particular IEEE 45-2002;

b. ABNT in particular NBR5052;

c. IEC Standards in particular IEC 60092;

and other applicable national and international standards.

200. Regulations

201. The requirements of the present section 8 of the Rules are according to:

For ships of GT < 500 under the Brazilian Flag:

NORMAM 01 or other relevant national and international Regulations.

For ships of GT < 500 under foreign Flags:

National Maritime Regulations or, in the absence of such regulations, the provisions of the International Convention for the Safety of |Life at Sea (SOLAS).

For ships of GT ≥ 500:

The provisions of the International Convention for the Safety of Life at Sea (SOLAS) as amended

Other relevant national and international Conventions, Resolutions, Codes and Guides.

CHAPTER B
TECHNICAL DOCUMENTATION

CHAPTER CONTENTS

B1. DOCUMENTATION FOR RBNA

100. Scope

101. Drawings and documents are to be subjected to the RBNA in digital files or alternatively in three hard copies, two of which are for RBNA files and one with approval stamp to be returned to the Owner. They are to include at least the following:

a. short description of the facilities, informing the location, types of equipment, alternative sources, emergency supply, criteria for installations, etc;

b. manuals of the equipment.

102. Drawings and documents to be submitted to RBNA are to contain all the dimension units are to be in accordance with the international system. Any dimension unit according to other systems are also to contain the indications of the corresponding values in the international system

CHAPTER C
MATERIALS AND MANUFACTURE

CHAPTER CONTENTS

C1. SELECTION OF MATERIALS

100. Suitability to the marine environment

101. All electrical and electronic devices are to be suitable for use in the marine environment, resistant to corrosion, not affected by vibrations present on board and are to be able to keep their performance standards in such conditions.

102. They are to comply with the requirements of:

a. Part II, Title 11, Section 7, E4.200

b. Part III, Title 63, section 8

200. New materials

201. Materials with innovative features may be used provided they are subject to approval of RBNA along with the project in which the material is intended.

CHAPTER D
BASIC PRINCIPLES FOR INSTALLATION

CHAPTER CONTENTS

D1. OPERATIONAL CONDITIONS

100. Installation on board

101. The principles of design and installation should be specified in each Chapter, according to the nature of each system.

CHAPTER E
NAVIGATIONAL AIDS, SIGNALS AND COMMUNICATION EQUIPMENTS

CHAPTER CONTENTS

E1. NAVIGATIONAL AIDS

100. Application

101. For ships under the Brazilian Flag under 300 GT, the requirements of NORMAM 01 or other relevant national regulations are to be met.

102. For ships under foreign Flags under 300 GT, National Regulations apply or, in absence of such regulations, the requirements of IMO Conventions and Resolutions according to the type of equipment.

103. For ships of 300 GT and larger, the requirements of IMO Conventions and Resolutions according to the type of equipment.

104. For all vessels the requirements of the International Regulation for Preventing Collisions at Sea (COLREG)

Guidance

In Portuguese, Regulamentos Internacionais para Evitar Abalroamentos no Mar (RIPEAM).

End of guidance

E2. LIGHTS AND SHAPES

201. All vessels are to be fitted with lights and shapes according to the requirements of COLREG / RIPEAM.

202. All ships are to be fitted with whistle, bell and gong according to COLREG / RIPEAM regulation 33.

203. An independent panel for the navigation lights is to be fitted provided with a burnt lights visual and audible alarm and means of testing. Spares for all lights are to be kept on board.

204. The navigation aids, bridge general arrangement and monitoring, control and alarms are to be in compliance with the resolutions of SOLAS Convention and COLREG / RIPEAM regulations and the IMO Resolutions applicable case by case.

103. The regulations for special missions and specific uses are given in the related Chapters.

E3. COMMUNICATION EQUIPMENT

100. Application

101. For Brazilian Flag ships under 300 GT the requirements of NORMAM 01 or other relevant national regulations are to be met.

102. For ships foreign Flags under 300 GT, National Regulations apply or, in absence of such regulations, the requirements of IMO Conventions and Resolutions according to the type of equipment.

103. For ships of 300 GT and larger, the requirements of the SOLAS Convention, Chapter IV and IMO Resolutions are applicable according to the type of equipment.

200. Installations

201. Emergency batteries for the radio are to be out of the Engine Room.

E4. INTERNAL COMMUNICATIONS

100. Operational communications

101. For all ships, an internal communication system between the Engine Room and the bridge shall be provided.

102. For all passenger ships of 500 GT and above, a communications system as described in Part II, Title 11, Section 3, Chapter E, Subchapter E16 is to be installed

IACS REC 16

103. All ships, irrespective of size, shall have a telephone, or other means to communicate heading information to the emergency steering position, if provided.

a. If there is more than one emergency steering position, it shall be possible to receive heading information at each individual steering position.

b. Loud-speaker(s) of talk-back type, headphones or similar means shall be used to ensure hands free reception of information at the emergency steering position.

104. All ships of 500 gross tonnage and upwards shall have a gyro-compass heading repeater, or other means, to supply heading information visually at the emergency steering position, if provided.

a. The gyro-compass repeater shall be positioned to be easily readable when reading the rudder angle on the rudder stock from emergency steering positions.

b. A gyro repeater with digital readout may be preferable for this purpose.

CHAPTER T
INSPECTIONS AND TESTING

CHAPTER CONTENTS

T1. TESTING ON BOARD

100. Trial program

101. The equipment covered by this Chapter shall be tested on board, according to Program of Surveys and Trials to be subjected to approval by RBNA.

T2. TESTING OF PROTECTION DEVICES FOR GENERATORS AND LARGE CONSUMERS ON BOARD [IACS Rec 49]

100. Testing of protection devices for generators and large consumers on board.

101. Electronic or computerized protection devices for generators and large consumers are to be provided with:

a. arrangements to readily identify the final settings, in the event of them being adjustable;

b. facilities and instructions for testing on board the settings and functions.

102. The settings of the above protection devices are to be recorded during the vessels “trials” and it is to be verified every 5 years that they are unchanged. The functions of the protection devices are also to be demonstrated.

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