

RULES FOR HIGH SPEED CRAFT

GUIDANCE FOR HIGH SPEED CRAFT

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2014 AMENDMENT NO.1
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Rule No.11 / Notice No.13 26th February 2014
Resolved by Technical Committee on 29th July 2013
Approved by Board of Directors on 24th September 2013

ClassNK
NIPPON KAIJI KYOKAI

RULES FOR HIGH SPEED CRAFT

2014 AMENDMENT NO.1

Rule No.11 26th February 2014

Resolved by Technical Committee on 29th July 2013

Approved by Board of Directors on 24th September 2013

“Rules for high speed craft” has been partly amended as follows:

Amendment 1-1

Part 10 ELECTRICAL INSTALLATIONS

Chapter 2 ELECTRICAL INSTALLATIONS AND SYSTEM DESIGN

2.1 General

2.1.2 Voltage and Frequency

Sub-paragraph -1(1) has been amended as follows.

1 System voltage is not, as a rule, to exceed:

- (1) ~~500~~1,000 V for generators, power equipment, and heating and cooking equipment connected to fixed wiring
- (2) 250 V for lighting, heaters in cabins and public rooms, equipment other than those specified in **(1)**
- (3) 15,000 V *a.c.* and 1,500 V *d.c.* installations for electric propulsion
- (4) 15,000 V *a.c.* for *a.c.* generators and *a.c.* power equipment meeting the requirements in **2.17, Part H of the Rules for the Survey and Construction of Steel Ships**

2.5 Switchboards, Section Boards and Distribution Boards

2.5.4 Busbars

Sub-paragraph -5 has been amended as follows.

5 ~~Clearance distances between live parts of different polarity or between live parts and earthed metals~~ Air clearances (phase-to-phase, pole-to-pole and phase-to-earth) of non-insulated busbars are not to be less than the values given in **Table 10.2.2.**

Table 10.2.2 has been amended as follows.

Table 10.2.2 Minimum Air Clearances ~~Distances~~ for Busbars

Rated voltage (V) between poles or phases (V)	Minimum clearance (mm)	
	Between phases or poles of live Parts <u>Air clearance (mm)</u>	Between live parts and earthed metals
125 or less	13	13
over 125 to 250 or less inclusive	16 <u>15</u>	13
over 250 to 500 inclusive	22 <u>20</u>	23
over 690 to 1,000 inclusive	<u>35</u>	

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 26 February 2014.

Part 9 MACHINERY INSTALLATIONS

Chapter 1 GENERAL

1.2 General Requirements for Machinery Installations

Paragraph 1.2.1 has been amended as follows.

1.2.1 General

(-1 to -8 are omitted)

~~9 Measures are to be taken to reduce machinery noise in machinery spaces to acceptable levels as determined by the National Regulations of the country in which the craft is registered. If this noise cannot be sufficiently reduced the source of excessive noise is to be suitably insulated or isolated or a refuge from noise is to be provided if the space is required to be manned. Ear protectors are to be provided for personnel required to enter such spaces, if necessary.~~

109 To prime movers used for lift or attitude control arrangements, the requirements concerning to the main propulsion machinery are to be applied.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 1 July 2014.
2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships other than ships that fall under the following:
 - (1) for which the building contract is placed on or after 1 July 2014; or
 - (2) in the absence of a building contract, the keels of which are laid or which are at *a similar stage of construction* on or after 1 January 2015; or(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 tonnes or 3% of the estimated mass of all structural material, whichever is the less.
 - (3) the delivery of which is on or after 1 July 2018

GUIDANCE FOR HIGH SPEED CRAFT

GUIDANCE

2014 AMENDMENT NO.1

Notice No.13 26th February 2014

Resolved by Technical Committee on 29th July 2013

“Guidance for high speed craft” has been partly amended as follows:

Amendment 1-1

Part 10 ELECTRICAL INSTALLATIONS

Chapter 2 ELECTRICAL INSTALLATION AND SYSTEM DESIGN

2.5 Switchboards, Section Boards and Distribution Boards

2.5.4 Busbars

1 Busbars and the contact faces of busbars and linking conductors are to be protected against corrosion or oxidization by means of silver plating, tin plating or dipping in a solder bath, etc.

2 Current rating of busbars may generally be determined by **Table 10.2.5.4-1**.

3 The wording “in cases where deemed appropriate by the Society” in **2.5.4-4, Part 10 of the Rules** refers to cases where documents which show that there are no adverse effects on any of the following **(1)** to **(5)** are submitted to and approved by the Society in cases where the temperature rises of any busbars, connecting conductors and their connections that are carrying full-load currents exceed $45K$ at an ambient temperature of $45^{\circ}C$.

- (1) Mechanical strength of the conducting material
- (2) Possible effect on adjacent equipment
- (3) Permissible temperature limits of the insulating materials in contact with the conductor
- (4) Effect of the temperature of the conductor on the apparatus connected to busbars
- (5) For plug-in contacts, the nature and surface treatment of the contact material

Table 10.2.5.4-1 has been amended as follows.

Table 10.2.5.4-1 Current Rating of Busbars

Type		Current rating	
For generators	In cases where only one generator is feeding power to the busbars.	100% or more of the rated current of the generator.	
	In cases where two or more generators are feeding power at their full capacities to the busbars.	<u>Subdivided busbar arrangement (distribution systems consisting of multiple busbars)</u>	<u>For each busbar (including spare circuits), ((100% of the large capacity rated currents (e.g. bow thrusters, etc.)) + (75% of the sum of the rated currents of the rest of the feeding circuits)) or more</u>
		<u>Single busbar arrangement (distribution system consisting of a single busbar)</u>	((100% of the rated current of one generator of the largest capacity) + (80% of the sum of the rated currents of generators)) or more
For power feeding	In the case of general power feeding circuits.	75% or more of the sum of the rated currents of the feeding circuits (including spare circuits). However, there is no need of exceeding the capacity of the generator busbars.	
	In cases where feeding circuits have only one load circuit, or where power is fed to groups of motors under continuous service.	The total load current or more.	

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 26 February 2014.

Part 2 CLASS SURVEYS

Chapter 3 PERIODICAL SURVEYS AND PLANNED MACHINERY SURVEYS

3.10 Planned Machinery Surveys

3.10.2 Continuous Machinery Surveys (CMS)

Sub-paragraph -6 has been amended as follows.

6 Confirmatory Survey

In ships deemed by the Society as maintaining their machinery and equipment well, overhaul inspections according to the CMS Program specified in -3 by the shipowner (or the ship management company) may forgo the open-up examination performed in the presence of Surveyors by conducting the following confirmatory surveys, provided that the machinery and equipment are overhauled as part of the ship's maintenance practices and the records from such overhauls are kept in good order. In this case, the date of the next open-up examination is to be within a 5-year period from the date of its last overhaul and inspection.

((1) and (2) are omitted)

(3) Timing of the confirmatory survey

A confirmatory survey is to be carried out by the ~~time-completion date of next~~ the first periodical survey ~~from~~ after the day the item of ~~the~~ machinery and equipment intended for the confirmatory survey was overhauled and inspected ~~at sea~~.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 26 February 2014.
2. Notwithstanding the amendments to the Guidance, the current requirements apply to the surveys for which the application is submitted to the Society before the effective date.
3. Notwithstanding the provision of preceding 2., the amendments to the Guidance may apply to the surveys for which the application is submitted to the Society before the effective date upon request by the owner.

Part 9 MACHINERY INSTALLATIONS

Chapter 1 GENERAL

1.2 General Requirements for Machinery Installations

Paragraph 1.2.1 has been amended as follows.

1.2.1 General

~~‡~~ The wording “navigable speed” in **1.2.1-3 of the Rules** means a speed at which the ship is capable of steering and being kept navigability for an extended period of time (the period required to get the nearest port for repairs). Normally, 7 knots or a speed corresponding to 1/2 of the speed specified in **2.1.8, Part 1 of the Rules** at the ship’s full loaded draught, whichever is smaller, may be regarded as a navigable speed.

~~2~~ In connection with the wording “excessive noise” in **1.2.1-9, Part 9 of the Rules** standards specified in *IMO Resolution A. 468 (XII)* are indicated below:

~~(1) Limits for noise levels in machinery spaces are specified as follows:~~

~~Machinery spaces (continuously manned) 90dB (A)~~

~~Machinery spaces (not continuously manned) 110dB (A)~~

~~Machinery control rooms 75dB (A)~~

~~Workshops 85dB (A)~~

~~Non specified work spaces 90dB (A)~~

~~(2) In the case where some works are carried out in high noise level space, the noise levels and duration of exposure (the period that persons are exposed to noise) are to be limited within the zones indicated in Fig. 9.1.2.1-1. The zones (A) to (F) shown in the figure mean as follows:~~

~~Zone (A) :No work even with ear muffs and ear plugs is permitted.~~

~~Zone (B) :Temporary works with both ear muffs and ear plugs may be permitted.~~

~~Zone (C) :Temporary works with ear muffs or ear plugs may be permitted.~~

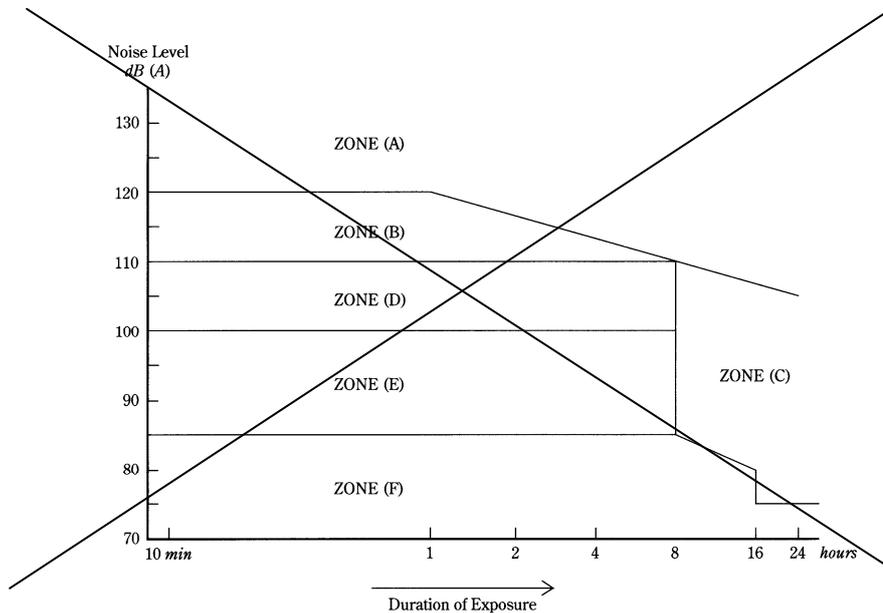
~~Zone (D) :Daily works with ear muffs may be permitted.~~

~~Zone (E) :Daily works with ear plugs may be permitted.~~

~~Zone (F) :No protection required.~~

~~(3) Insertion losses obtained by ear protection for overall and for individual frequencies are to be in accordance with Table 9.1.2.1-1 and Table 9.1.2.1-2~~

~~Fig. 9.1.2.1-1 Allowable daily and occasional noise exposure zones~~



~~Table 9.1.2.1-1 Overall insertion loss obtained by ear protection~~

Type of Ear Protection	Insertion loss (-dB (A))
ear-plugs	20
ear-muffs	20
ear-plugs and ear-muffs	25

~~Table 9.1.2.1-2 Insertion loss for individual frequencies obtained by ear protection~~

Type of Ear Protection	Octave band centre frequency (Hz)							
	125	250	500	1,000	2,000	3,150	4,000	6,300
ear-plugs	0	5	10	15	22	22	22	22
ear-muffs	5	12	20	30	30	30	30	30

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 1 July 2014.
2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships other than ships that fall under the following:
 - (1) for which the building contract is placed on or after 1 July 2014; or
 - (2) in the absence of a building contract, the keels of which are laid or which are at *a similar stage of construction* on or after 1 January 2015; or

(Note) The term “*a similar stage of construction*” means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 tonnes or 3% of the estimated mass of all structural material, whichever is the less.

 - (3) the delivery of which is on or after 1 July 2018