

# **RULES FOR HIGH SPEED CRAFT**

GUIDANCE FOR HIGH SPEED CRAFT

**Rules for High Speed Craft**  
**Guidance for High Speed Craft**

**2018 AMENDMENT NO.3**  
**2018 AMENDMENT NO.2**

Rule No.137 / Notice No.106      25 December 2018  
Resolved by Technical Committee on 1 August 2018

**ClassNK**  
NIPPON KAIJI KYOKAI

An asterisk (\*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

---

# **RULES FOR HIGH SPEED CRAFT**

**RULES**

## **2018 AMENDMENT NO.3**

Rule No.137      25 December 2018

Resolved by Technical Committee on 1 August 2018

An asterisk (\*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

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

## **Part 2 CLASS SURVEYS**

### **Chapter 2 CLASSIFICATION SURVEYS**

#### **2.1 Classification Survey during Construction**

##### **2.1.2 Submission of Plans and Documents for Approval\***

Sub-paragraph -1(2) has been amended as follows.

**1** When it is intended to build a craft to the classification with the Society, the following plans and documents are to be submitted for the approval by the Society before the work is commenced. Plans and documents may be subjected to examination by the Society prior to the submission of the application for the classification of the craft in accordance with the provision specified otherwise by the Society:

- (1) (Omitted)
- (2) Machinery
  - (a) (Omitted)
  - (b) Main and auxiliary engines (including their accessories):
    - i) Diesel engines  
Plans and data specified in **2.1.3-1(1), Part 9** of the Rules as well as documents showing specifications of louvers for emergency generator rooms and closing appliances of ventilators fitted to the rooms (if they are of power-operated type.)
    - ii) Gas turbines  
Plans and data specified in **3.1.2(1), Part 9** of the Rules
  - (c) Power transmission gears, shaftings and propellers:  
Plans and data specified in **4.1.2(1), 5.1.2(1), 5.2.2, 5.3.3(1)** and **5.4.2-1, Part 9** of the Rules
  - (d) Boilers, thermal oil heaters, incinerators and pressure vessels:  
Plans and data specified in **6.1.1, 6.3.1(1)** and **6.4.1, Part 9** of the Rules
  - (e) (Omitted)
  - (f) Steering gear:  
Plans and data specified in **9.1.2(1), Part 9** of the Rules
  - (g) (Omitted)
  - (h) Automatic and remote controls:  
Plans and data specified in **12.1.3(1), Part 9** of the Rules
  - (i) (Omitted)
  - (j) Electrical installations:  
Plans and data specified in **1.1.5, Part 10** of the Rules
    - ~~i) Drawings~~
      - ~~1) Sectional assembly of generators, motors and electromagnetic slipcouplings for~~

- ~~electric propulsion equipment including complete rating, main dimensions, main materials used and weights~~
- ~~2) Key diagram and explanation of electric propulsion control gears~~
  - ~~3) Sectional assembly of generators (main, auxiliary and emergency) of 100 kW (or 100 kVA) and over, including complete rating, main dimensions, main materials used and weights~~
  - ~~4) Arrangement plan (including specifications of main parts such as circuit breakers, fuses, instruments and cables) and circuit diagrams of main switchboard and emergency switchboard~~
  - ~~5) Plans of the arrangement of electrical equipment and of cable installation~~
  - ~~6) Diagrams of the wiring system including normal working current, rated current, prospective short circuit current in the circuits, line drop of voltages, type of cables, cable sizes, rating and setting of circuit breakers, rating of fuses and switches, and breaking capacity of circuit breakers and fuses~~
  - ~~7) Sectional assembly drawings of windlass electric motors rated 100 kW and over, including their ratings, main dimensions, main materials used and weights~~
- ~~ii) Data~~
- ~~1) Explanation of electric propulsion system~~
  - ~~2) Investigation table of electrical power~~
  - ~~3) List of particulars of high voltage electrical equipment (including test voltage for dielectric strength)~~
  - ~~4) The following data in cases where the electrical distribution system on board a ship includes harmonic filters, except in cases where the filters are installed for single application frequency devices such as pump motors:
 
    - ~~i) Total Harmonic Distortion (THD) calculation report~~
    - ~~ii) Harmonic filter operation guide~~~~

((3) and (4) are omitted.)

### 2.1.3 Submission of Other Plans and Documents

Sub-paragraph -1(7) has been amended as follows.

1 When it is intended to build a craft to the classification with the Society, the following plans and documents are to be submitted in addition to those required in 2.1.2:

((1) to (6) are omitted.)

(7) The following plans and documents related to machinery:

(a) Main and auxiliary engines (including their accessories):

i) Diesel engines

Plans and data specified in 2.1.3-1(2) and (3), Part 9 of the Rules

ii) Gas turbines

Plans and data specified in 3.1.2(2), Part 9 of the Rules

(b) Power transmission gears, shaftings and propellers:

Plans and data specified in 4.1.2(2), 5.1.2(2) and 5.3.3(2), Part 9 of the Rules

(c) Boilers, thermal oil heaters, incinerators and pressure vessels:

Plans and data specified in 6.3.1(2), Part 9 of the Rules

(d) Auxiliary machinery and piping:

Plans and data specified in 10.2.2(2), Part 9 of the Rules

(e) Steering gear:

Plans and data specified in 9.1.2(2), Part 9 of the Rules

(f) Automatic and remote controls:

Plans and data specified in 12.1.3(2), Part 9 of the Rules  
((8) and (9) are omitted.)

## Part 9 MACHINERY INSTALLATIONS

### Chapter 12 AUTOMATIC AND REMOTE CONTROL

#### 12.1 General

Paragraph 12.1.3 has been amended as follows.

##### 12.1.3 Drawings and Data\*

Drawings and data to be submitted are generally, as follows. In cases where the Society deems it to be necessary, the submission of drawings and data other than those specified below may be requested.

##### (1) Drawings and data for approval

##### (a) Drawings and data concerning automation

~~(a)~~ (i) List of measuring points

~~(b)~~ (ii) List of alarm points

~~(c)~~ (iii) Control devices and safety devices

~~1)~~ (1) List of controlled objects and controlled variables

~~2)~~ (2) Kinds of control energy sources (self-actuated, pneumatic, electric, etc.)

~~3)~~ (3) List of conditions for emergency stopping, speed reduction (automatic or demand for reduction), etc.

##### (b) The following drawings and data for the automatic control devices and remote control devices for main propulsion machinery or controllable pitch propellers

~~(a)~~ (a) Operating instructions of main propulsion machinery such as starting and stopping, change-over of direction of revolution, increase and decreased of output, etc.

~~(b)~~ (b) Arrangements of safety devices (including those attached to engines) and pilot lamps

~~(c)~~ (c) Controlling diagrams

##### (c) Following drawings and data for the automatic control devices and remote control devices for boilers

~~(a)~~ (a) Operating instructions of sequential control, feed water control, pressure control, combustion control and safety devices

~~(b)~~ (b) Diagrams for automatic combustion control devices and automatic feed water control devices

##### (d) Diagrams and operating instructions for automatic control devices for electric generating sets (automatic load sharing devices, preference tripping devices, automatic starting devices, automatic synchronous making devices, sequential starting devices, etc.)

##### (e) Panel arrangements of monitoring panels, alarm panels and control stands at respective control stations

##### (f) Drawings and data deemed necessary by the Society for computer based ~~for those computers and computerized~~ systems specified in **12.1.1-3**

##### (2) Drawings and data for reference

Drawings and data deemed necessary by the Society for computer based systems specified in **12.1.1-3**

# Part 10 ELECTRICAL INSTALLATIONS

## Chapter 1 GENERAL

### 1.1 General

Paragraph 1.1.5 has been amended as follows.

#### 1.1.5 Drawings and Data

The drawings and data ~~specified in 2.1.2, Part 2 are to be submitted~~ to be submitted are as follows.

##### (1) Drawings

- (a) Sectional assembly of generators, motors and electromagnetic slipcouplings for electric propulsion equipment including complete rating, main dimensions, main materials used and weights
- (b) Key diagram and explanation of electric propulsion control gears
- (c) Sectional assembly of generators (main, auxiliary and emergency) of 100 kW (or 100 kVA) and over, including complete rating, main dimensions, main materials used and weights
- (d) Arrangement plan (including specifications of main parts such as circuit breakers, fuses, instruments and cables) and circuit diagrams of main switchboard and emergency switchboard
- (e) Plans of the arrangement of electrical equipment and of cable installation
- (f) Diagrams of the wiring system including normal working current, rated current, prospective short-circuit current in the circuits, line drop of voltages, type of cables, cable sizes, rating and setting of circuit breakers, rating of fuses and switches, and breaking capacity of circuit breakers and fuses
- (g) Sectional assembly drawings of windlass electric motors rated 100 kW and over, including their ratings, main dimensions, main materials used and weights

##### (2) Data

- (a) Explanation of electric propulsion system
- (b) Investigation table of electrical power
- (c) List of particulars of high voltage electrical equipment (including test voltage for dielectric strength)
- (d) The following data in cases where the electrical distribution system on board a ship includes harmonic filters, except in cases where the filters are installed for single application frequency devices such as pump motors.
  - i) Total Harmonic Distortion (THD) calculation report
  - ii) Harmonic filter operation guide

## EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 25 December 2018.
2. Notwithstanding the amendments to the Rules, the current requirements apply to ships for which the date of contract for construction\* is before the effective date.
3. Notwithstanding the provision of preceding 2., the amendments to the Rules may apply to ships for which the date of contract for construction\* is before the effective date upon request by the owner or the manufacturer.  
\* “contract for construction” is defined in the latest version of IACS Procedural Requirement (PR) No.29.

### IACS PR No.29 (Rev.0, July 2009)

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder. For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
  - (1) such alterations do not affect matters related to classification, or
  - (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which 1. and 2. above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:

This Procedural Requirement applies from 1 July 2009.

---

# **GUIDANCE FOR HIGH SPEED CRAFT**

**GUIDANCE**

**2018 AMENDMENT NO.2**

Notice No.106      25 December 2018

Resolved by Technical Committee on 1 August 2018

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

## **Part 2 CLASS SURVEYS**

### **Chapter 2 CLASSIFICATION SURVEYS**

#### **2.1 Classification Survey during Construction**

Paragraph 2.1.2 has been amended as follows.

##### **2.1.2 Submission of Plans and Documents for Approval**

~~‡~~ The wordings “deemed appropriate by the Society” in **2.1.2-6, Part 2 of the Rules** means as follows;

~~((1) to (3) are omitted.)~~

~~2~~ “Total Harmonic Distortion (THD) calculation report” specified in ~~2.1.2-1(2)(j)ii)4)i), Part 2 of the Rules~~ is to include the following information:

~~(1) Results of the calculation of the Total Harmonic Distortion (THD) value experienced when a failure of a harmonic filter occurs.~~

~~(2) With respect to 2.1.2-4, Part 10 of the Rules, the acceptable limit of the Total Harmonic Distortion (THD) value.~~

~~3~~ The “harmonic filter operation guide” specified in ~~2.1.2-1(2)(j)ii)4)ii), Part 2 of the Rules~~ is to include the following information:

~~(1) The permitted operating mode of the electrical distribution system while maintaining the Total Harmonic Distortion (THD) values within acceptable limits during normal operation.~~

~~(2) The permitted operating mode of the electrical distribution system in the case of failure of any combination of harmonic filters.~~

~~4~~ Data specified in ~~2~~ and ~~3~~ are to be submitted by the system integrator of the distribution system.

~~5~~ “Diagrams of the wiring system” specified in ~~2.1.2-1(2)(j)i)6), Part 2 of the Rules~~ are to include the following information concerning electrical systems of the windlass, as applicable:

~~(1) Cable specification and size~~

~~(2) Motor controller~~

~~(3) Protective device rating or setting~~

~~6~~ “Sectional assembly drawings” specified in ~~2.1.2-1(2)(j)i)7), Part 2 of the Rules~~ are to include the information of associated gears.

## Part 9 MACHINERY INSTALLATIONS

### Chapter 12 AUTOMATIC AND REMOTE CONTROL

#### 12.1 General

Paragraph 12.1.3 has been amended as follows.

##### 12.1.3 Drawings and Data

1 The “~~The~~ drawings and data deemed necessary by the Society” stipulated in ~~12.1.3(1)(f)(6)~~, **Part 9 of the Rules** refer to the items specified in **1.2(1), Annex D18.1.1 “COMPUTER BASED SYSTEMS”, Part D of the Guidance for the Survey and Construction of Steel Ships** as a standard. With respect to computer based systems ~~those automatic devices and equipment~~ which have been already approved by the Society in accordance with Chapter 8, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, only drawings and data on parts that differ from ship to ship need to be submitted.

2 The “drawings and data deemed necessary by the Society” stipulated in **12.1.3(2), Part 9 of the Rules** refer to the items specified in **1.2(2), Annex D18.1.1 “COMPUTER BASED SYSTEMS”, Part D of the Guidance for the Survey and Construction of Steel Ships** as a standard. With respect to computer based systems which have been already approved by the Society in accordance with Chapter 8, Part 7 of the Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use, only drawings and data on parts that differ from ship to ship need to be submitted; this, however, excludes those specified in **1.2(2)(a)** of the Annex.

# Part 10 ELECTRICAL INSTALLATIONS

## Chapter 1 GENERAL

Section 1.1 has been added as follows.

### 1.1 General

#### 1.1.5 Drawing and Data

1 “Diagrams of the wiring system” specified in 1.1.5(1)(f), Part 10 of the Rules are to be include the following information concerning electrical systems of the windlass, as applicable:

- (1) Cable specification and size
- (2) Motor controller
- (3) Protective device rating or setting

2 “Sectional assembly drawings” specified in 1.1.5(1)(g), Part 10 of the Rules are to be include the information of associated gears.

3 “Total Harmonic Distortion (THD) calculation report” specified in 1.1.5(2)(d)i), Part 10 of the Rules is to be include the following information:

- (1) Results of the calculation of the Total Harmonic Distortion (THD) value experienced when a failure of a harmonic filter occurs
- (2) In applying 2.1.2-4, Part 10 of the Rules, the acceptable limit of the Total Harmonic Distortion (THD) value

4 The “harmonic filter operation guide” specified in 1.1.5(2)(d)ii), Part 10 of the Rules is to include the following information:

- (1) The permitted operating mode of the electrical distribution system while maintaining the Total Harmonic Distortion (THD) values within acceptable limits during normal operation
- (2) The permitted operating mode of the electrical distribution system in the case of failure of any combination of harmonic filters

5 Data specified in -3 and -4 are to be submitted by the system integrator of the distribution system.

## EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 25 December 2018.
2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction\* is before the effective date.
3. Notwithstanding the provision of preceding 2., the amendments to the Guidance may apply to ships for which the date of contract for construction\* is before the effective date upon request by the owner or the manufacturer.  
\* “contract for construction” is defined in the latest version of IACS Procedural Requirement (PR) No.29.

### IACS PR No.29 (Rev.0, July 2009)

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder. For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
  - (1) such alterations do not affect matters related to classification, or
  - (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which 1. and 2. above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:

This Procedural Requirement applies from 1 July 2009.