RULES FOR HIGH SPEED CRAFT

GUIDANCE FOR HIGH SPEED CRAFT

Rules for High Speed Craft **2018 AMENDMENT NO.2**
Guidance for High Speed Craft **2018 AMENDMENT NO.1**

Rule No.104 / Notice No.56 29 June 2018
Resolved by Technical Committee on 31 January 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.2

Rule No.104 29 June 2018

Resolved by Technical Committee on 31 January 2018

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

Rule No.104 29 June 2018
AMENDMENT TO THE RULES FOR HIGH SPEED CRAFT

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

Amendment 2-1

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) to (g) are omitted.)

(h) Automatic and remote controls:

Plans and data specified in **12.1.3, Part 9** of the Rules

~~i) Drawings and data concerning automation~~

~~1) List of measuring points~~

~~2) List of alarm points~~

~~3) List of controlled objects and controlled variables for control devices and safety devices~~

~~4) Kinds of sources of control energy (self-actuated, pneumatic, electric, etc.)~~

~~5) List of conditions for emergency stopping, speed reduction (automatic or demand for reduction), etc.~~

~~ii) Following drawings and data for the automatic control devices and remote control devices for main propulsion machinery or controllable pitch propellers~~

~~1) Operating instructions of main propulsion machinery such as starting and stopping, change-over of direction of revolution, increase and decrease of output, etc.~~

~~2) Arrangements of safety devices (including those attached to the engines) and pilot lamps~~

~~3) Controlling diagrams~~

~~iii) Following drawings and data for the automatic control devices and remote control devices for boilers~~

~~1) Operating instructions of sequential control, feed water control, pressure control,~~

~~combustion control and safety devices~~

~~2) Diagrams for automatic combustion control devices and automatic feed water control devices~~

~~iv) 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.)~~

~~v) Panel arrangements of monitoring panels, alarming panels and control stands at respective control stations~~

~~vi) Drawings and data related to computer based systems subject to **12.1.1-3, Part 9 of this Rules**~~

((i) and (j) are omitted.)

(3) (Omitted)

(4) (Omitted)

Part 9 MACHINERY INSTALLATIONS

Chapter 12 AUTOMATIC AND REMOTE CONTROL

12.1 General

12.1.1 Scope*

Sub-paragraph -3 has been amended as follows.

3 ~~In cases where machinery and equipment which are deemed necessary by the Society use computer based systems for the proper achievement of their functions, the design, construction, commissioning and maintenance of such computer~~ Computer based systems, including the hardware and software which constitute such systems, are to be in accordance with requirements specified otherwise by the Society in addition to those specified in **-1** and **-2** above and throughout the rest of this chapter for design, construction, commissioning, maintenance, etc.

Sub-paragraph -4 has been added as follows.

4 The requirement in **-3** above is not applicable to equipment mentioned below:
(1) navigating equipment specified in the **Rules for Safety Equipment**,
(2) radio installations specified in the **Rules for Radio Installations**,
(3) stability instruments, and
(4) loading computers.

Paragraph 12.1.3 has been added as follows.

12.1.3 Drawings and Data*

Drawings and data to be submitted are generally, as follows:
(1) Drawings and data concerning automation
  (a) List of measuring points
  (b) List of alarm points
  (c) Control devices and safety devices
    i) List of controlled objects and controlled variables
    ii) Kinds of control energy sources (self-actuated, pneumatic, electric, etc.)
    iii) List of conditions for emergency stopping, speed reduction (automatic or demand for reduction), etc.
(2) The following drawings and data for the automatic control devices and remote control devices for main propulsion machinery or controllable pitch propellers.
  (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) Arrangements of safety devices (including those attached to engines) and pilot lamps
  (c) Controlling diagrams
(3) Following drawings and data for the automatic control devices and remote control devices for boilers:
  (a) Operating instructions of sequential control, feed water control, pressure control,

combustion control and safety devices.

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

(4) 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.)

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

(6) Drawings and data for those computers and computerized systems specified in **12.1.1-3**

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 29 June 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.

Amendment 2-2

Part 2 CLASS SURVEYS

Chapter 3 PERIODICAL SURVEYS AND PLANNED MACHINERY SURVEYS

3.3 Annual Surveys for Hull

3.3.1 Requirements for Annual Surveys

Sub-paragraphs -1 to -3 have been amended as follows.

1 At each Annual Survey, the general condition of the hull and equipment is to be examined and tested as far as practicable and placed in good order with special attention being paid to the following:

(1) Upon outside of the hull being cleaned, keel plating, shell plating, stems, stern frames and foils, etc., are to be examined. Attention is to be given to parts of the structure particularly liable to excessive corrosion, discontinuous parts of the structure and openings in the shell. Grillage covers of openings in the shell are to be removed for the inspections, where considered necessary by the Surveyor.

(2) Rudders and shaft brackets are to be examined. In this case, rudders are to be lifted or removed and pintles and gudgeons, etc., are to be examined. This may be dispensed with provided the Surveyor is satisfied with bearing condition of the rudder by a measurement of the clearances.

(3) ~~Sea inlets and overboard discharges with valves, cocks and their fastening to the hull below freeboard deck~~The scuppers, inlets and discharges including their valves are to be examined.

(4) The following items **(a)** to **(c)** are to be examined~~.~~, and are to be tested, where considered necessary by the Surveyor, in accordance with the provisions specified in **Table 2.2.1** of this Part.

(a) ~~Cargo ports and other similar openings.~~ The watertight integrity of the closures to any openings in the ship's side below the freeboard deck

(b) ~~Coamings with closing appliances of hatchways on exposed deck and within unenclosed superstructures.~~ The means of securing the weathertightness of cargo hatchways, other hatchways and other openings on the freeboard and superstructure decks

(c) Side scuttles and deadlights ~~below the freeboard deck or superstructure deck. And, for weathertight hatch covers, cargo ports, side scuttles and other similar openings are to be tested under the pressure specified in **Table 2.2.1** of this Part, where considered necessary by the Surveyor.~~

(5) Exposed engine casings and their openings, fiddley openings, engine room skylights and their closing appliances are to be examined.

(6) ~~Coamings and closing appliances of ventilators led to spaces below the freeboard deck or spaces within enclosed superstructures~~ Ventilators including their coamings and closing appliances are to be examined.

(7) ~~Air pipes and sounding pipes on weather decks together with closing appliances~~ Air pipes including their coamings and closing appliances are to be examined.

(8) Watertight doors, penetrations~~,~~ and stop valves on watertight bulkheads, and ~~closing~~

~~appliances in~~ superstructure end bulkheads and the closing appliances for the openings therein are to be examined. The operation tests of watertight doors on watertight bulkheads and closing appliances in superstructure end bulkheads are to be carried out.

(9) Bulwarks, shutters of freeing ports in bulwarks or guard rails are to be examined.

~~(10) The arrangements of structural fire protection and means of escape are to be examined and operation tests are to be carried out.~~

(~~11~~10) Watertight bulkhead penetration.

(~~12~~11) ~~Permanent gangways or other equivalent means of access~~ The guardrails, gangways, walkways and other means provided for the protection of the crew and means for safe passage of crew are to be examined.

(~~13~~12) For craft required to be marked with load lines corresponding to the assigned freeboard, load line marks are to be verified.

(~~14~~13) The stability information booklet approved by the Society is to be confirmed to be kept board.

(~~15~~14) For craft required to be provided with the loading manual in accordance with the requirement of **1.4.2, Part 6** of this Rule, filing of the loading manual on board the craft for ready use is to be checked.

(~~16~~15) For craft required to be provided with the loading computer in accordance with the requirement of **1.4.3, Part 6** of this Rule, it is to be confirmed that a loading computer having the performance and functions as deemed appropriate by the Society is installed on board.

(~~17~~16) For craft required to be marked with the ship's identification number, general condition of the marking is to be examined.

(~~18~~17) For craft of not less than 500 *gross tonnage* engaged on international voyages, general conditions of portable atmosphere testing instruments for enclosed spaces specified in **1.2.1, Part 14** are to be examined. (This includes the confirmation of calibration records.)

2 Drainage, mooring and anchoring arrangements and their accessories are to be examined. The means provided to minimize water ingress through the spurling pipes and chain lockers are also to be examined.

3 ~~Fire extinguishing arrangements are to be examined and tested and placed in good order, attention being paid to the following as well as general examinations of the condition of the fire extinguishing arrangements:~~ In addition to the general examinations for arrangements for fire protection, fire extinction and means of escape, general examinations and operation tests of the following **(1)** to **(17)** are to be carried out.

(1) Fire control plans kept on board are to be examined.

(2) As far as possible, general examinations and ~~O~~operation tests of fixed fire detection and fire alarm systems (including manually operated call points) and sample extraction smoke detection system are to be carried out.

(3) ~~Operation tests of fire pumps (including emergency fire pumps), fire main, hydrants, fire hoses, nozzles, etc. are to be carried out.~~ Fire pumps (including emergency fire pumps), fire main, hydrants, hoses, nozzles and the international shore connection are to be examined. Regarding fire pumps (including emergency fire pumps), it is to be confirmed that two jets of water are produced simultaneously from different hydrants at any part of the ship whilst the required pressure is maintained in the fire main are to be carried out.

(4) ~~Operation tests of fixed pressure water-spraying fire-extinguishing systems are to be carried out.~~ The fixed firefighting system for the machinery, cargo, vehicle, special category and ro-ro spaces are to be examined, as appropriate, and it is to be confirmed that its means of operation is clearly marked. It is also to be confirmed that fixed carbon dioxide fire-extinguishing systems are provided with two separate controls, one for opening of the gas piping and one for discharging the gas from the storage container, each of them located in a release box

clearly identified for the particular space.

(5) ~~Conditions of maintenance of the fixed fire-fighting systems, semi-portable and portable fire extinguishers are to be examined.~~ Provision of the portable and non-portable fire extinguishers is to be checked, and the condition of these is to be randomly examined.

(6) Operation tests of ventilation systems for the release of smoke are to be carried out.

(7) ~~Conditions of maintenance of~~ For the ~~fireman's~~firefighters' outfits, general examinations of the following **(a)** and **(b)** are to be ~~examined~~carried out.

(a) It is to be confirmed that the firefighters' outfits including its self-contained compressed air breathing apparatus are complete and in good condition.

(b) It is to be confirmed that the cylinders, including the spare cylinders, of any required self-contained breathing apparatus are suitably charged.

(8) Fire-extinguishing and special arrangements in the machinery spaces are to be examined. As far as practicable and as appropriate, operation of the remote means of control provided for the opening and closing of the skylights, the release of smoke, the closure of the funnel and ventilation openings, the closure of power operated and other doors, the stopping of ventilation and boiler forced and induced draft fans and the stopping of oil fuel and other pumps that discharge flammable liquids are to be examined.

(9) Fire-extinguishing systems for spaces containing paint and/or flammable liquids and deep-fat cooking equipment in accommodation and service spaces are to be examined.

(10) General emergency alarm system is to be examined and tested.

(11) Fire protection arrangements (closing appliance, ventilation system, portable fire extinguisher, etc.) in cargo, vehicle and ro-ro spaces are to be examined. The operation of the means of control provided for closing the various openings are to be confirmed, as far as practicable and as appropriate.

(12) The special arrangements for carrying dangerous goods are to be examined, when appropriate. This includes the check of the electrical equipment and wiring, the ventilation, the provision of protective clothing and portable appliances, and operation tests of the water supply, bilge pumping and any water spray system.

(13) It is to be confirmed, as far as practicable, that no changes have been made in the structural fire protection.

(14) As far as practicable, any manual and automatic fire doors are to be examined, and their operation is to be proved.

(15) Proper operation of the means of closing the main inlets and outlets of all ventilation systems is to be confirmed, as far as practicable.

(16) Proper operation of the means of stopping power ventilation systems from outside the space served is to be confirmed, as far as practicable.

(17) It is to be confirmed that the means of escape from accommodation, machinery and other spaces are satisfactory.

4 The operation tests prescribed in **-1(8)**, however, may be dispensed with at the discretion of the Surveyor.

3.6 Annual Surveys for Machinery

Paragraph 3.6.1 has been amended as follows.

3.6.1 Requirements for Annual Surveys*

At each Annual Survey for Machinery, a general examination of the whole machinery in the engine room and the following inspections **(1)** to **(~~7~~8)** are to be carried out;

((1) to (7) are omitted.)

(8) Arrangements for remote closing of valves for fuel oil tanks, lubricating oil tanks and other flammable oil tanks are to be examined.

Paragraph 3.6.2 has been amended as follows.

3.6.2 Performance Tests*

At each Annual Survey for Machinery, performance tests for the following items in **(1)** to **(7)** are to be carried out in order to ascertain that they are placed in good order.

(1) ~~Remote shut-off devices for fuel oil tanks and lubricating oil tanks~~ Arrangements for remote closing of valves for fuel oil tanks, lubricating oil tanks and other flammable oil tanks, as far as practicable and as appropriate

(2) Emergency stopping devices for fuel oil pumps, ventilating fans and boiler draught fans

(3) Emergency sources of electrical powers

(4) All the means of communication between the navigation bridge and the machinery control position, as well as between the bridge and the steering gear compartment

(5) Main and auxiliary steering gears (including deflectors and reversers for waterjet propulsion systems) together with their associated equipment and control systems are to be subjected to the ~~following~~ performance tests ~~in **(a)** to **(e)**~~.

~~(a) Operation tests for the power units including changeover to each other~~

~~(b) Operation tests for automatic and remote isolation of the power actuating systems specified in **15.6, Part D of the Rules for the Survey and Construction of Steel Ships**~~

~~(c) Tests for supply of the alternative source of power specified in **15.2, Part D of the Rules for the Survey and Construction of Steel Ships**~~

~~(d) Operation tests for the control system including the changeover system~~

~~(e) Operation tests for the alarm devices, rudder angle indicators and running indicators of power units specified in **Part D of the Rules for the Survey and Construction of Steel Ships**~~

(6) Bilge systems

Operation tests for the valves (including ones for emergency use), cocks, strainers, pumps, reachrods and level alarms of the bilge systems

(7) Operation tests for the safety devices, etc. specified in the following **(a)** to **(~~d~~e)** are to be carried out. However, the tests may be omitted at the Surveyor's discretion based on the general examination, and hearing of the working conditions at sea and inspection records taken by the ship's crew.

(a) Main propulsion machinery and auxiliary machinery

Operation tests of the following safety devices and alarm devices for main propulsion machinery and prime movers for driving generators, auxiliary machinery essential for main propulsion and auxiliary machinery for the manoeuvring and the safety are to be carried out.

(i) to iii) are omitted.)

(b) Boilers, thermal oil heaters and incinerators

Operation tests for the safety devices, alarm devices and pressure indicators specified in **Chapter 9, Part D of the Rules for the Survey and Construction of Steel Ships** are to be carried out. Calibration records for the pressure indicators of boilers are to be ascertained. Where deemed necessary by the Surveyor, the control records of the boiler water and thermal heater oil are required to be presented for review.

(c) Monitoring devices

Operation tests for pressure indicators, thermometers, ammeters, voltmeters and revolution meters are to be carried out.

(d) Automatic control devices and remote control devices

Operation tests for automatic control devices and remote control devices used for auxiliary machinery essential for main propulsion and auxiliary machinery for the manoeuvring and the safety as well as the means of remotely controlling the propulsion machinery from the navigating bridge (including the control, monitoring, reporting, alert and safety actions) are to be carried out.

(e) Engineer's Alarm

It is to be confirmed that the engineer's alarm is clearly audible in the engineers' accommodation.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 29 June 2018.

2. Notwithstanding the amendments to the Rules, the current requirements apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 2-3

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) to (d) are omitted.)

(e) Auxiliary machinery and piping:

i) Piping diagrams in the engine room (with materials, sizes, kinds, design pressure and design temperature)

ii) Plans and data specified in **10.2.2(1), Part 9 of the Rules**

((f) to (i) are omitted.)

(j) Electrical installations

i) Drawings

(1) to 6) are omitted.)

7) Sectional assembly drawings of windlass electric motors rated 100 *kW* and over, including their ratings, main dimensions, main materials used and weights

ii) (Omitted)

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

2.1.3 Submission of Other Plans and Documents

Sub-paragraph -1 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) Auxiliary machinery and piping:

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

(~~7~~8) For crafts using low-flashpoint fuels, the plans and documents specified in **2.1.3-1(~~9~~10)**, **Part B of the Rules for the Survey and Construction of Steel Ships**

(~~8~~9) Other plans and documents may be required where deemed necessary by the Society.

Part 9 MACHINERY INSTALLATIONS

Chapter 1 GENERAL

1.1 General

1.1.1 Scope

Sub-paragraph -5 has been amended as follows.

5 The terms specified in this ~~chapter~~ part are in accordance with the requirements of **1.1.6, Part D of the Rules for the Survey and Construction of Steel Ships**.

1.3 Tests

1.3.1 Shop Tests

Sub-paragraph (6) has been amended as follows.

Before installation on board, machinery installations are to be tested according to the following requirements at the plants.
((1) to (5) are omitted.)
(6) Pipes, Valves, Pipe Fittings and Auxiliaries
Pipes, valves, pipe fittings and auxiliaries are to be subjected to tests specified in **12.6.1** and **16.2.5, Part D of the Rules for the Survey and Construction of Steel Ships**.
((7) to (9) are omitted.)

Chapter 10 has been amended as follows.

Chapter 10 WINDLASSES AND MOORING WINCHES

10.1 General

10.1.1 Scope

~~**1**~~ The requirements in this Chapter apply to windlasses and mooring winches ~~driven by electric power, hydraulic power or steam~~.
~~**2** The windlasses and mooring winches other than those specified in **-1** are to be subject to approval by the Society.~~

10.2 Windlasses

10.2.1 General

Unless otherwise specified in this chapter, windlasses are to be in accordance with requirements in **Chapter 16, Part D of the Rules for the Survey and Construction of Steel Ships**.

10.2.2 Drawings and Data*

The following drawings and data showing design specifications, standards of compliance, engineering analyses and details of construction, are, in principle, to be submitted.

(1) Drawings and data for approval:
- (a) Windlass design specifications
- (b) Windlass arrangement plan
- (c) Dimensions, materials and welding details of torque-transmitting components and load-bearing components
- (d) Drawings and data concerning hydraulic systems
- (e) Control, monitoring and instrumentation arrangements
- (f) Procedures for shop tests
- (g) Other drawings and data considered necessary by the Society

(2) Drawing and data for reference:
- (a) Calculated strength for torque-transmitting components and load-bearing components
- (b) General arrangements and sectional assembly drawings of chain cable stoppers and documents which demonstrate the chain cable stoppers are in accordance with requirements specified in **16.2.4-2(6), Part D of the Rules for the Survey and Construction of Steel Ships** (in cases where chain cable stoppers are fitted)
- (c) Load calculations of prime movers (in cases where the load test specified in **16.2.5-1(3), Part D of the Rules for the Survey and Construction of Steel Ships** is not carried out)
- (d) Calculation sheets for cable lifter brake capacities (in cases where the cable lifter brake capacity test specified in **16.2.5-1(4), Part D of the Rules for the Survey and Construction of Steel Ships** is not carried out)
- (e) Operation and maintenance procedures
- (f) Other drawings and data considered necessary by the Society

10.3 Mooring Winches

10.~~1.2~~3.1 Structure, etc.

1 ~~Windlasses and m~~Mooring winches are to comply with the Japanese Industrial Standards or other recognized standards deemed appropriate by the Society.

2 ~~Windlasses, m~~Mooring winches and their beds and other accessory facilities are to be installed effectively and securely onto the deck.

~~**10.1.3 Ability of Windlasses**~~

~~The windlass is to have sufficient ability to lift an anchor and chains paid out in the sea.~~

EFFECTIVE DATE AND APPLICATION (Amendment 2-3)

1. The effective date of the amendments is 1 July 2018.

2. Notwithstanding the amendments to the Rules, the current requirements apply to windlasses for which the application for approval is submitted to the Society before the effective date and that are installed on ships for which the date of contract for construction* is before the effective date.

* "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.

Amendment 2-4

Part 2 CLASS SURVEYS

Chapter 2 CLASSIFICATION SURVEYS

2.1 Classification Survey during Construction

2.1.4 Presence of Surveyor

Sub-paragraph -5 has been added as follows.

1 The presence of the Surveyor is required at the following stages of the work in relation to hull and equipment:
((1) to (17) are omitted.)
2 The presence of the Surveyor is required at the following stages of the work in relation to machinery:
((1) to (4) are omitted.)
(5) When sea trials are carried out.
((6) is omitted.)
3 For crafts using low-flashpoint fuels, the presence of the Surveyor is required for tests specified in **Part GF of the Rules for the Survey and Construction of Steel Ships**, in addition to the tests specified in **-1** and **-2**.
4 The requirements specified in **-1** to **-3** may be modified having regard to the actual status of facilities, technical abilities and quality control at the works, except the case of sea trials.
5 For the tests specified in **-1** to **-3** above, the applicant is to prepare test plans for review by the Society prior to testing. Test records and/or measurement records are to be submitted to the Society, as required.

EFFECTIVE DATE AND APPLICATION (Amendment 2-4)

1. The effective date of the amendments is 1 July 2018.

2. Notwithstanding the amendments to the Rules, the current requirements apply to ships for which the date of contract for construction* is or for which the application for examinations of altered parts is dated before the effective date.

* "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.

Amendment 2-5

Part 7 EQUIPMENT AND PAINTING

Chapter 1 EQUIPMENT

1.1 Anchors, Chain Cables and Ropes

1.1.1 General*

Sub-paragraph -1 has been amended as follows.

1 All craft, according to their equipment numbers, are to be provided with anchors, chain cables and mooring lines which are not less than given in **Table 7.1.1**. All crafts are to be provided with suitable appliances for handling the anchors and the lines.

Table 7.1.1 has been amended as follows.

Table 7.1.1 Anchor, Chain Cables and Ropes

Equipment letter	Equipment number		Anchor		Chain cable for ~~bower~~ anchor (Stud anchor for chain)				Tow line		Mooring line		
						Diameter							
			Number	Mass per anchor (stockless anchor)	Total length	Grade 1	Grade 2	Grade 3	Length	Breaking load	Number	Length	Breaking load
	Over	Up to		*kg*	*m*	*mm*	*mm*	*mm*	*m*	*kN*		*m*	*kN*
A_1	50	70	2	180	220	14	12.5		180	98	3	80	~~34~~37
A_2	70	90	2	240	220	16	14		180	98	3	100	~~37~~40
A_3	90	110	2	300	247.5	17.5	16		180	98	3	110	~~39~~42
A_4	110	130	2	360	247.5	19	17.5		180	98	3	110	~~44~~48
A_5	130	150	2	420	275	20.5	17.5		180	98	3	120	~~49~~53
B_1	150	175	2	480	275	22	19		180	98	3	120	~~54~~59
B_2	175	205	2	570	302.5	24	20		180	112	3	120	~~59~~64
B_3	205	240	2	660	302.5	26	22	20.5	180	129	4	120	~~64~~69
B_4	240	280	2	780	330	28	24	22	180	150	4	120	~~69~~75
B_5	280	320	2	900	357.5	30	26	24	180	174	4	140	~~74~~80
C_1	320	360	2	1020	357.5	32	28	24	180	207	4	140	~~78~~85
C_2	360	400	2	1140	385	34	30	26	180	224	4	140	~~88~~96
C_3	400	450	2	1290	385	36	32	28	180	250	4	140	~~98~~107
C_4	450	500	2	1440	412.5	38	34	30	180	277	4	140	~~108~~117
C_5	500	550	2	1590	412.5	40	34	30	190	306	4	160	~~123~~134
D_1	550	600	2	1740	440	42	36	32	190	338	4	160	~~132~~143
D_2	600	660	2	1920	440	44	38	34	190	371	4	160	~~147~~160
D_3	660	720	2	2100	440	46	40	36	190	406	4	160	~~157~~171
D_4	720	780	2	2280	467.5	48	42	36	190	441	4	170	~~172~~187
D_5	780	840	2	2460	467.5	50	44	38	190	480	4	170	~~186~~202
E_1	840	910	2	2640	467.5	52	46	40	190	518	4	170	~~201~~218
E_2	910	980	2	2850	495	54	48	42	190	559	4	170	~~216~~235
E_3	980	1060	2	3060	495	56	50	44	200	603	4	180	~~230~~250
E_4	1060	1140	2	3300	495	58	50	46	200	647	4	180	~~250~~272
E_5	1140	1220	2	3540	522.5	60	52	46	200	691	4	180	~~270~~293
F_1	1220	1300	2	3780	522.5	62	54	48	200	738	4	180	~~284~~309
F_2	1300	1390	2	4050	522.5	64	56	50	200	786	4	180	~~309~~336
F_3	1390	1480	2	4320	550	66	58	50	200	836	4	180	~~324~~352
F_4	1480	1570	2	4590	550	68	60	52	~~200~~ 220	888	5	190	~~324~~352
F_5	1570	1670	2	4890	550	70	62	54	~~200~~ 220	941	5	190	~~333~~362

Notes:

~~1 Where steel wire ropes are used, the following wire ropes corresponding to the marks shown in the Table. ●(6×12), ○(6×24), and ◎(6×37), are to be provided.~~

~~2~~1 Length of chain cables may include shackles for connection.

2 Values given for anchoring equipment in this table are based on an assumed maximum current speed of 2.5 *m/s*, a maximum wind speed of 25 *m/s* and a minimum scope of chain cable of 6, the scope being the ratio between the paid-out length of the chain and water depth.

1.1.5 Mooring Lines

Sub-paragraphs -1 and -2 have been amended as follows.

1 As for wire ropes and ~~hemp~~ fibre ropes used as mooring lines, the breaking test load specified in **Chapter 4** or **5, Part L of the Rules for the Survey and Construction of Steel Ships** is not to be less than the breaking load given in **Table 7.1.1** respectively.
2 Application of ~~synthetic~~ fibre ropes for mooring lines is to be as deemed appropriate by the Society.

Paragraph 1.1.6 has been renumbered to Paragraph 1.1.8, and Paragraph 1.1.6 has been added as follows.

1.1.6 Chain Lockers
1 All craft are to be provided with suitable appliances for handling of anchors.
2 Chain lockers are to be of capacities and depths adequate to provide an easy direct lead of the cables through the chain pipes and a self-stowing of the cables.
3 Chain lockers including spurling pipes are to be watertight up to the weather deck and to be provided with a means for drainage.
4 Chain lockers are to be subdivided by centre line screen walls.
5 Where a means of access is provided, it is to be closed by a substantial cover and secured by closely spaced bolts.
6 Where a means of access to spurling pipes or cable lockers is located below the weather deck, the access cover and its securing arrangements are to be to the satisfaction of the Society. Butterfly nuts and/or hinged bolts are prohibited as the securing mechanism for the access cover.
7 Spurling pipes through which anchor cables are led are to be provided with permanently attached closing appliances to minimize water ingress.
8 The inboard ends of the chain cables are to be secured to the structures by fasteners able to withstand a force not less than 15% and not more than 30% breaking load of the chain cable.
9 Fasteners are to be provided with a means suitable to permit, in case of emergency, an easy slipping of chain cables to the sea, operable from an accessible position outside the chain locker.

Paragraph 1.1.7 has been added as follows.

1.1.7 Supporting Hull Structures of Anchor Windlasses and Chain Stoppers
1 The supporting hull structures of anchor windlasses and chain stoppers are to be sufficient to accommodate operating loads and sea loads
(1) Operating loads are to be taken as not less than the following:
  (a) For chain stoppers, 80% of the chain cable breaking load
  (b) For windlasses, where no chain stopper is fitted or a chain stopper is attached to the windlass, 80% of the chain cable breaking load
  (c) For windlasses, where chain stoppers are fitted but not attached to the windlass, 45% of the chain cable breaking load
(2) Sea loads are to be taken according to **2.1.6, Section 4, Chapter 11, Part 1 of Part CSR-B&T**
2 The permissible stresses for supporting hull structures of windlasses and chain stoppers, based on gross thicknesses, are not to be greater than the following permissible values:
(1) Normal stress: 1.00 R_{eH}
(2) Shear stress: 0.60 R_{eH}
  R_{eH}: The specified minimum yield stress of the material

Paragraph 1.1.8 has been amended as follows.

1.1.~~6~~8 Miscellaneous

~~**1** All craft are to be provided with suitable appliances for handling of anchors.~~

~~**2** Chain cable and wire ropes are to be stored in chain lockers or on the drums. The inboard end of a chain cable is to be secured to the hull through a strong eye plate by means of shackle or other equivalent means.~~

~~**3**~~**1** Bower anchors are to be located on the suitable position to prevent any damage on hull structures in the cases of anchoring operation. If necessary, anchor bell mouths are to be fitted for this purpose.

~~**4**~~**2** The arrangements for anchoring, towing and berthing and the local craft structure and the design of the anchor, towing and berthing arrangements and the local craft structure are to be such that risks to persons carrying out anchoring, towing or berthing procedures are kept to a minimum.

~~**5**~~**3** All anchoring equipment, towing bitts, mooring bollards, fairleads, cleats and eyebolts are to be so constructed and attached to the hull that, in use up to design loads, the watertight integrity of the craft will not be impaired.

~~**6**~~**4** Under any operating load up to the breaking strength of the anchor cable or mooring lines, the loads on the bitts, bollards, etc., is not to result in any damage to the hull structure that will impair its watertight integrity. A strength margin of at least 20% above the resultant load based on the minimum specified breaking strength of the relevant cable or warp shall be required.

EFFECTIVE DATE AND APPLICATION (Amendment 2-5)

1. The effective date of the amendments is 1 July 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.

* "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.1

Notice No.56 29 June 2018

Resolved by Technical Committee on 31 January 2018

Notice No.56 29 June 2018
AMENDMENT TO THE GUIDANCE FOR HIGH SPEED CRAFT

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

Amendment 1-1

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

1 (Omitted)

~~**2** The drawings and data stipulated in **2.1.2-1(2)(h)vi), Part 2 of the Rules** refer to items specified in **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 those automatic devices and equipment which have been already approved by the Society, only data on parts that differ from ship to ship need to be submitted.~~

~~**3**~~**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 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) With respect to **2.1.2-4, Part 10 of the Rules**, the acceptable limit of the Total Harmonic Distortion (THD) value.

~~**4**~~**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.

~~**5**~~**4** Data specified in ~~**-3**~~**2** and ~~**-4**~~**3** are to be submitted by the system integrator of the distribution system.

Part 9 MACHINERY INSTALLATIONS

Chapter12 AUTOMATIC AND REMOTE CONTROL

12.1 General

Paragraph 12.1.1 has been amended as follows.

12.1.1 Scope

1 (Omitted)

~~**2** The "machinery and equipment which are deemed necessary by the Society" referred to in **12.1.1-3, Part 9 of the Rules** means machinery and equipment used for the purposes specified in **(1)** to **(4)** given below and includes programmable controllers such as sequencers.~~

~~(1) Control systems for the machinery and equipment specified in **12.1.1-1, Part 9 of the Rules**.~~

~~(2) Alarm systems specified in **18.2.5, Part D of the Rules for the Survey and Construction of Steel Ships**.~~

~~(3) Safety systems for the machinery and equipment specified in **12.1.1-1, Part 9 of the Rules**.~~

~~(4) Control, alarm, and safety systems related to **Table 2.1 of Annex D18.1.1** "**COMPUTER BASED SYSTEMS**", **Part D of the Guidance for the Survey and Construction of Steel Ships**.~~

~~**3** Notwithstanding the requirements in **-2** above, the "machinery and equipment which are deemed necessary by the Society" referred to in **12.1.1-3, Part 9 of the Rules** is not to include the machinery and equipment specified in the following **(1)** to **(4)**:~~

~~(1) navigating equipment specified in the **Rules for Safety Equipment**,~~

~~(2) radio installations specified in the **Rules for Radio Installations**,~~

~~(3) stability instruments, and~~

~~(4) loading computers.~~

42 The "requirements specified otherwise by the Society" referred to in **12.1.1-3, Part 9 of the Rules** means **Annex D18.1.1** "**COMPUTER BASED SYSTEMS**", **Part D of the Guidance for the Survey and Construction of Steel Ships**.

Paragraph 12.1.3 has been added as follows.

12.1.3 Drawings and Data

The drawings and data stipulated in **12.1.3(6), Part 9 of the Rules** refer to items specified in **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 those automatic devices and equipment which have been already approved by the Society, only data on parts that differ from ship to ship need to be submitted.

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 29 June 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.

Amendment 1-2

Part 2 CLASS SURVEYS

Chapter 3 PERIODICAL SURVEYS AND PLANNED MACHINERY SURVEYS

3.2 Intervals of Periodical Surveys and Planned Machinery Surveys

3.2.1 General

Sub-paragraph -2 has been amended as follows.

2 If an Annual or Intermediate Survey is completed before the period specified in **3.2.2** or **3.2.3, Part 2 of the Rules** in accordance with **3.2.1-4, Part 2 of the Rules**, due dates of subsequent Annual Surveys and Intermediate Surveys are assigned in accordance with **3.2.2** and **3.2.3, Part 2 of the Rules** respectively based on new anniversary date. The new anniversary date is to be a date which is not to be more than 3 *months* later than the ~~day corresponding to the day after 3 *months* since~~ date on which the moved up Survey was completed. In such cases, where the third new anniversary date after due dates of the Intermediate Survey comes earlier than the expiry date of the Classification Certificate of the ship, the Intermediate Survey is to be carried out 3 *months* either way of the third new anniversary date.

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 due date of the next open-up examination is ~~to be within a 5-*year* period from~~ 5 *years* 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~~ no later than the completion date of the first periodical survey (excluding those specified in **3.1.1-1(4), Part 2 of the Rules**, hereinafter the same in this **(3)**) on or after the day the item of machinery and equipment intended for the confirmatory survey was overhauled and inspected. Notwithstanding the above, if the shipowner (or the ship management company) applies for a survey, it may be allowed to carry out a confirmatory survey no later than the completion date of the second periodical survey on or after the day the item of machinery and equipment intended for the confirmatory survey

was overhauled and inspected, but on or before the due date of the open-up examination.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 29 June 2018.

Amendment 1-3

Part 2 CLASS SURVEYS

Chapter 3 PERIODICAL SURVEYS AND PLANNED MAINTENANCE SURVEYS

3.6 Annual Surveys for Machinery

Paragraph 3.6.1 has been amended as follows.

3.6.1 Requirements for Annual Surveys

1 In general examinations specified in **3.6.1, Part 2 of the Rules**, for ships equipped with electrical distribution systems which include harmonic filters, it is to be ascertained that the filters are placed in good order and either of the following **(1)** or **(2)** is to be verified, except in cases where the filters are installed for single application frequency drives such as pump motors.

(1) For harmonic filters included in the electrical distribution systems described in either the following **(a)** or **(b)**, the records of the Total Harmonic Distortion (*THD*) value specified in **2.12.4-1, Part H of the Rules** are to be verified.
   (a) Electrical distribution systems on board ships for which the date of contract for construction is on or after 1 July 2017.
   (b) Electrical distribution systems on board ships for which the date of contract for construction is before 1 July 2017, but which are newly fitted with harmonic filters on or after 1 July 2017.

(2) For harmonic filters other than **(1)(a)** or **(b)**, correct operation is to be confirmed by verifying that the maximum Total Harmonic Distortion (*THD*) value of the main busbar on board the ship is measured under typical seagoing conditions as close as possible to the date of the Annual Survey and the value does not exceed the acceptable limit.

2 In applying **3.6.1, Part 2 of the Rules**, the operation of the ventilation for the machinery spaces is to be confirmed.

3 In applying **3.6.1(1), Part 2 of the Rules**, the following **(1)** to **(8)** are also to be applied.

(1) It is to be confirmed that the normal operation of the propulsion machinery can be sustained or restored even though one of the essential auxiliaries becomes inoperative.

(2) The means for the operation of the main and auxiliary machinery essential for the propulsion and the safety of the ship are to be examined.

(3) The arrangements to operate the main and other machinery from a machinery control room are to be examined.

(4) It is to be confirmed that the machinery, boilers and other pressure vessels, associated piping systems and fittings are installed and protected so as to reduce to a minimum any danger to persons on board, due regard being given to moving parts, hot surfaces and other hazards.

(5) It is to be confirmed that means are provided so that the machinery can be brought into operation from the dead ship condition without external aid.

(6) The electrical installations, including the main source of power and the lighting systems are, as far as practicable, to be examined visually and in operation.

(7) It is to be examined that the precautions provided against shock, fire and other hazards of electrical origin are being maintained.

(8) The condition of any expansion joints in seawater systems are to be visually examined.

4 In applying **3.6.1(2), Part 2 of the Rules**, a general examination of the machinery, the boilers,

all steam, hydraulic, pneumatic and other systems and their associated fittings is to be carried out to see whether they are being properly maintained and with particular attention to the fire and explosion hazards.

Paragraph 3.6.2 has been added as follows.

3.6.2 Performance Tests

1 In applying **3.6.2, Part 2 of the Rules**, **2.3.2-2** of **Rules for Automatic and Remote** is also to be applied for surveys of periodically unattended machinery spaces.

2 In applying **3.6.2(3), Part 2 of the Rules**, the operation of the emergency source(s) of electrical power including their starting arrangements, the systems supplied and, when appropriate, their automatic operation are also to be confirmed as far as practicable.

3 In applying **3.6.2(4), Part 2 of the Rules**, the following **(1)** and **(2)** are also to be applied.

(1) It is to be confirmed that the means of communication between the navigation bridge and steering gear compartment and the means of indicating the angular position of the rudder are operating satisfactorily.

(2) It is to be confirmed that the engine room telegraph, the second means of communication between the navigation bridge and the machinery space and the means of communication with any other positions from which the engines are controlled are operating satisfactorily

4 In applying **3.6.2(5), Part 2 of the Rules**, the following **(1)** to **(4)** are to be applied.

(1) In addition to carrying out the following **(a)** to **(e)** performance tests for main and auxiliary steering arrangements, including their associated equipment and control systems, the said arrangements are to be examined.
   (a) Operation tests for the power units including changeover from one to another;
   (b) Operation tests for automatic and remote isolation of the power actuating systems specified in **15.6, Part D of the Rules for the Survey and Construction of Steel Ships**;
   (c) Tests for supply of the alternative source of power specified in **15.2, Part D of the Rules for the Survey and Construction of Steel Ships**;
   (d) Operation tests for the control system including the changeover system; and
   (e) Operation tests for the alarm devices, rudder angle indicators and running indicators of power units specified in **Part D of the Rules for the Survey and Construction of Steel Ships**.

(2) It is to be confirmed that with ships having emergency steering positions there are means of relaying heading information and, when appropriate, of supplying visual compass readings to the emergency steering position.

(3) It is to be confirmed that the various alarms required for hydraulic power-operated, electric and electro-hydraulic steering gears are operating satisfactorily.

(4) It is to be confirmed that the re-charging arrangements for hydraulic power-operated steering gears are being maintained.

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 29 June 2018.

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.

Amendment 1-4

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-paragraphs -6 and -7 have been added as follows.

6 "Diagrams of the wiring system" specified in **2.1.2-1(2)(j)i)6), Part 2 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
7 "Sectional assembly drawings" specified in **2.1.2-1(2)(j)i)7), Part 2 of the Rules** are to be include the information of associated gears.

Part 9 MACHINERY INSTALLATIONS

Chapter 10 has been added as follows.

Chapter 10 WINDLASSES AND MOORING WINCHES

10.2 Windlasses

10.2.2 Drawings and Data

1 "Windlass design specifications" specified in **10.2.2(1)(a), Part 9 of the Rules** are to be include the following in addition to windlass particulars:

(1) Anchor and chain cable particulars

(2) Maximum anchorage depth

(3) Performance criteria

(4) Standard or code of practice of compliance

2 "Windlass arrangement plan" specified in **10.2.2(1)(b), Part 9 of the Rules** are to be show all of the components of the anchoring/mooring system. The followings are examples of the components:

(1) Prime movers, shafting, cable lifters, anchors, chain cables, brakes and controls

(2) Mooring winches, wires and fairleads, if they form part of the windlass machinery

(3) Marking of nominal size of chain cable and maximum anchorage depth

3 "Dimensions, materials and welding details of torque-transmitting components and load-bearing components" specified in **10.2.2(1)(c), Part 9 of the Rules** are to comply with the followings:

(1) Information of mooring winches are to be included in case where the mooring winch is one with a windlass.

(2) Proposed materials are to be indicated.

(3) Weld joint designs, the degree of non-destructive examination of welds and post-weld heat treatment are to be indicated.

4 "Drawings and data concerning hydraulic systems" specified in **10.2.2(1)(d), Part 9 of the Rules** are to include the following:

(1) Piping diagram along with system design pressure

(2) Safety valves arrangement and settings

(3) Material specifications for pipes and equipment

(4) Typical pipe joints, as applicable

(5) Technical data and details for hydraulic motors

5 "Calculated strength for torque-transmitting components and load-bearing components" specified in **10.2.2(2)(a), Part 9 of the Rules** are to comply with the following:

(1) It is to be demonstrated that torque-transmitting components and load-bearing components comply with a standard or code of practice recognized by the Society.

(2) Analyses for gears are to be in accordance with a standard recognized by the Society.

6 "Load calculations" specified in **10.2.2(2)(c), Part 9 of the Rules** are to demonstrate that the prime mover is capable of attaining the hoisting speed, the required continuous duty pull and the overload capacity specified in **16.2.4, Part D of the Rules for the Survey and Construction of Steel Ships**.

7 "Operation and maintenance procedures" specified in **10.2.2(2)(e), Part 9 of the Rules** are to

show the maximum anchorage depth.

EFFECTIVE DATE AND APPLICATION (Amendment 1-4)

1. The effective date of the amendments is 1 July 2018.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to windlasses for which the application for approval is submitted to the Society before the effective date and that are installed on ships for which the date of contract for construction* is before the effective date.

* "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.

Amendment 1-5

Part 2 CLASS SURVEYS

Chapter 2 CLASSIFICATION SURVEYS

2.1 Classification Survey during Construction

Paragraph 2.1.4 has been added as follows.

2.1.4 Presence of Surveyor

In applying **2.1.4-5, Part 2 of the Rules**, the test plan related to the astern test specified in **2.3.1(2)** is to be provided by the yard. If specific operational characteristics have been defined by the manufacturer, these are to be included in the test plan.

2.3 Sea Trials and Stability Experiments

Paragraph 2.3.1 has been amended as follows.

2.3.1 Sea Trials

Details of each test to be carried out during sea trials are to be in accordance with the following requirements.

((1) is omitted.)

(2) Astern test

The astern test is to be carried out in accordance with the following **(a)** and **(b)**:

(a) ~~The astern performance and stopping performance of a craft are to be verified by reversing operation from full ahead run to full astern run as fast as possible w~~While the main propulsion machinery is running ahead at its maximum continuous output, an order for full astern is issued and the reversing operation from ahead run to full astern run is carried out as quickly as possible, and the astern performance and stopping performance of craft are to be verified. ~~For craft with high speed machinery as its main propulsion machinery, the output of main propulsion machinery when the astern order is issued may be reduced reasonably to such a condition that it can proceed with the reverse operation. Further, craft with outboard engines capable of pivotting may be tested with reduced output of engines.~~ In applying this provision, the tests are to be carried out from all control positions where there are multiple control positions for the reversing operation to astern run.

(b) ~~In all these tests, the astern operation is to be continued until the astern speed (rotational speed in rpm) is stabilized and all machinery are to be verified to be opearable effectively.~~ It is to be confirmed that the machinery is functioning normally while the ship is running astern. The main engine is to be kept at a rate of more than 70% of the maximum continuous revolutions until the astern speed (rotational speed in rpm) stabilizes.

((3) to (10) are omitted.)

(11) Other tests where deemed necessary by the Society

At least following tests **(a)** to **(c)** are to be included in this test

(a) In craft having multiple propellers or waterjet propulsion systems, the craft's navigating and manoeuvring performance with one or more propellers or waterjet propulsion

systems inoperative is to be verified.

(b) When the craft is provided with supplementary means for manoeuvring or stopping, performance test of such means is to be carried out.

((c) is omitted.)

EFFECTIVE DATE AND APPLICATION (Amendment 1-5)

1. The effective date of the amendments is 1 July 2018.

2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction* is or for which the application for examinations of altered parts is dated before the effective date.

* "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.

Amendment 1-6

Part 2 CLASS SURVEYS

Chapter 2 CLASSIFICATION SURVEYS

2.5 Alterations

2.5.1 Requirements of Surveys

Sub-paragraph -4 has been added as follows.

4 In applying **2.5.1, Part 2 of the Rules**, the astern response characteristics of ships considered by the Society to have undergone significant repairs which impact the response characteristics of their propulsion systems are to be verified after such repairs are carried out by correspondingly applying the requirements for the astern tests carried out at Classification Surveys during Construction (See **2.3.1, Part 2 of the Rules** and **2.1.4** of this Chapter). The tests are to demonstrate the satisfactory operation of the equipment or system under realistic service conditions at least over the manoeuvring range of the propulsion plant, for both ahead and astern directions. Depending on the actual extent of the repair, the Society may accept a reduction of the test plan.

EFFECTIVE DATE AND APPLICATION (Amendment 1-6)

1. The effective date of the amendments is 1 July 2018.