

RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

Rules for the Survey and Construction of Inland Waterway Ships
2015 AMENDMENT NO.1
Guidance for the Survey and Construction of Inland Waterway Ships
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Rule No.34 / Notice No.36 8th May 2015
Resolved by Technical Committee on 2nd February 2015
Approved by Board of Directors on 23rd February 2015

ClassNK
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RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

RULES

2015 AMENDMENT NO.1

Rule No.34 8th May 2015

Resolved by Technical Committee on 2nd February 2015

Approved by Board of Directors on 23rd February 2015

AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

“Rules for the survey and construction of inland waterway ships” has been partly amended as follows:

Amendment 1-1

Part 2 CLASS SURVEYS

Chapter 8 PROPELLER SHAFT AND STERN TUBE SHAFT SURVEYS

8.1 Propeller Shaft and Stern Tube Shaft Surveys

Paragraph 8.1.3 has been amended as follows.

8.1.3 Preventive Maintenance System

Notwithstanding the requirements in **8.1.1** above, where the ship is equipped with oil lubricated stern tube bearings and appropriate stern tube oil sealing devices as approved by the Society, ~~and at least the following (1) through (4) are properly monitored and recorded for diagnosing the lubricating conditions of the shafting system and maintaining the system preventively based on the results of the diagnoses subject to approval of the Society;~~ the survey items of -2, -3 and -5 in **Table 2.8.1** may be replaced with a general examination of the shafting system provided that all condition monitoring data taken according to the approved preventive maintenance system is found to be within permissible limits. ~~For a ship of which the preventive maintenance system has been approved by the Society, the notation “Propeller Shaft Condition Monitoring System” (abbreviated to PSCM) is affixed to the ship’s classification character and~~ The propeller shaft may be examined as a propeller shaft Kind 1B for the remaining requirements except -2, -3 and -5 in **Table 2.8.1**. The examination required by survey item -6 in **Table 2.8.1** may be partly dispensed with where deemed appropriate by the Society.

(1) Based upon Society approved preventive maintenance systems, at least the following (a) through (d) are to be properly monitored and recorded for diagnosing lubricating conditions of shafting systems and performing preventive system maintenance. Moreover, the notation “Propeller Shaft Condition Monitoring System” (abbreviated as “PSCM”) is to be affixed to the classification characters of ships whose preventive maintenance systems are approved by the Society.

~~(1)(a)~~ Lubricating oil sampling and analysis is to be carried out regularly at intervals not exceeding 6 months, with at least and each analysis is to include the following (a) i) through (d) iv) being analyzed each time at least:

~~(a) i)~~ i) Water contents

~~(a) ii)~~ ii) Chlorides contents

~~(a) iii)~~ iii) Contents of shaft metal and bearing metal particles

~~(a) iv)~~ iv) Oxidation of oil

~~(2)(b)~~ Lubricating oil consumption rate

~~(3)(c)~~ Bearing temperature

~~(4)(d)~~ The values specified in -4 of **Table 2.8.1**

- (2) Based upon Society approved preventive maintenance systems, at least the following (a) through (e) are to properly monitored and recorded for diagnosing lubricating conditions of shafting systems and performing preventive system maintenance. Moreover, the notation “Propeller Shaft Condition Monitoring System • A” (abbreviated as “PSCM • A”) is to be affixed to the classification characters of ships whose preventive maintenance systems are approved by the Society.
- (a) Lubricating oil sampling and analysis is to be carried out regularly at intervals not exceeding 6 months , with at least the following i) through iv) being analyzed each time:
- i) Water content
 - ii) Chloride content
 - iii) Content of shaft metal and bearing metal particles
 - iv) Oxidation of oil
- (b) The monthly onboard checking of lubricating oil water content. Such checking, however, may be omitted when the oil sampling and analysis specified in (a) above is carried out regularly at intervals not exceeding 3 months.
- (c) Lubricating oil consumption rate
- (d) Bearing temperature
- (e) The values specified in -4 of **Table 2.8.1**

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 8 May 2015.

Part 7 MACHINERY INSTALLATIONS

Chapter 4 SHAFTINGS

4.2 Materials, Construction and Strength

4.2.2 Intermediate Shafts

Table 7.4.2 has been amended as follows.

Table 7.4.2 Values of k_1

Shaft with integral flange coupling	Shaft with flange coupling either shrink fit, push fit or cold fit ⁽¹⁾	Shaft with keyway ⁽²⁾	Shaft with transverse hole ⁽³⁾	Shaft with longitudinal slot ⁽⁴⁾	Shaft with splines ⁽⁵⁾
1.0	1.0	1.1	1.1	1.2	1.15

Notes:

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

(4) The shape of the slot is to be in accordance with the following: any edge rounding other than by chamfering is to be avoided in principle; the number of slots is to be 1, 2 or 3 and they are to be arranged 360, 180 or 120 degrees apart from each other respectively.

(a) $l < 0.8d_a$

(b) $d_i < \del{0.8} 0.7d_a$

(c) $\del{0.1} 0.15d_a < e \leq 0.2d_a$

(d) $r = e / 2$

Where:

l : slot length

d_a : outside diameter of the hollow shaft

d_i : inside diameter of the hollow shaft

e : slot width

r : end rounding of the slot

((5) is omitted.)

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 1 July 2015.
2. Notwithstanding the amendments to the Rules, the current requirements may 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.

Part 2 CLASS SURVEYS

Chapter 2 CLASSIFICATION SURVEYS

2.3 River Trials and Stability Experiments

Paragraph 2.3.1 has been amended as follows.

2.3.1 River Trials

1 In the Classification Survey of all ships, river trials specified in following **(1)** to **(8)** are to be carried out in full load condition, in the calmest possible water and weather condition and in deep unrestricted water. However, where river trials cannot be carried out in full load condition, river trials may be carried out in an appropriate loaded condition.

- (1) Astern test
- (2) Steering test and the change-over test from the main to auxiliary steering gears
- (3) Confirmation of no abnormality for the operating condition of machinery and behaviour of the ship during the trials
- (4) Performance test of windlasses
- (5) Performance test of automatic and remote control systems for main propulsion machinery, controllable pitch propellers, boilers and electric generating sets
- (6) Accumulation test of boilers
- (7) Measurement of torsional vibration for the shafting systems (if required)
- (8) Other tests where deemed necessary by the Society

2 In the steering test prescribed in -1(2), the steering capabilities required by 12.2.2 and 12.2.3, Part 7 of the Rules are to be confirmed. Where it is impractical to perform the test with the ship at its deepest rivergoing draught and running ahead at the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch, ships may demonstrate compliance with this requirement by one of the following methods:

- (1) During river trials, the ship is at even keel and the rudder fully submerged whilst running ahead at the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch (in case of the auxiliary steering gear, one half of this speed or 7 knots, whichever is greater).
- (2) Where full rudder immersion during river trials cannot be achieved, an appropriate ahead speed is to be calculated using the submerged rudder blade area in the proposed river trial loading condition. The calculated ahead speed is to result in a force and torque applied to the main steering gear which is at least as great as if it was being tested with the ship at its deepest rivergoing draught and running ahead at the speed corresponding to the number of maximum continuous revolutions of the main engine and maximum design pitch (in case of the auxiliary steering gear, one half of this speed or 7 knots, whichever is greater).
- (3) The rudder force and torque at the river trial loading condition have been reliably predicted and extrapolated to the full load condition. The speed of the ship is to correspond to the number of maximum continuous revolutions of the main engine and maximum design pitch of the propeller (in case of the auxiliary steering gear, one half of this speed or 7 knots, whichever is greater).

23 The results of the tests specified in -1 are to be submitted to the Society as river trial records.

~~34~~ In the case of classification Survey of ships not built under the Society's survey, the above tests may be dispensed with, provided that sufficient data on the previous tests are available and no alteration affecting the tests specified in -1 have been made after the previous tests and the Society deems it appropriate.

~~45~~ Notwithstanding the requirements in -1 through ~~34~~, river trials may be omitted for barges. However, for barges having unconventional construction or a special navigation system, river trials may be required where deemed necessary by the Society.

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 1 January 2016.
2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.

(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 1% of the estimated mass of all structural material, whichever is the less.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF INLAND WATERWAY SHIPS

GUIDANCE

2015 AMENDMENT NO.1

Notice No.36 8th May 2015

Resolved by Technical Committee on 2nd February 2015

“Guidance for the survey and construction of inland waterway ships” has been partly amended as follows:

Amendment 1-1

Part 2 CLASS SURVEYS

Chapter 8 PROPELLER SHAFT AND STERN TUBE SHAFT SURVEYS

8.1 Propeller Shaft and Stern Tube Shaft Surveys

Paragraph 8.1.3 has been amended as follows.

8.1.3 Preventive Maintenance System

1 The wording “Appropriate stern tube sealing devices as approved by the Society” and devices for properly monitoring the bearing temperature specified in 8.1.3, Part 2 of the Rules, are specified respectively as follows means stern tube sealing devices capable of being repaired and replaced without withdrawing the shaft.

- ~~(1) Stern tube sealing devices capable of being repaired and replaced without drawing the shaft~~
~~(2) Either of the following devices to measure the temperature at the aft end bottom of the stern tube metal and a device to record the temperature:—~~
- ~~(a) Two or more temperature sensors embedded in the metal~~
 - ~~(b) An embedded temperature sensor replaceable from inboard the ship and a spare temperature sensor.~~

~~In this case, replacement with the spare sensor is to be demonstrated according to the procedures submitted beforehand.~~

2 The preventive maintenance system specified in 8.1.3, Part 2 of the Rules, is to be approved in accordance with the procedures specified in Table 2.8.1.3-1.

3 The wording “where deemed appropriate by the Society” in 8.1.3, Part 2 of the Rules means those cases where it is difficult to sufficiently draw out the propeller from the propeller shaft for those ships in which the distance between the propeller and the rudder plate is short and where no sign of slippage between the shaft and propeller has been confirmed. However, even in such cases, the propeller is to be drawn out from its shaft as far as possible and the condition of the propeller boss bore is to be checked by the Surveyor.

4 The wording “properly monitored” in 8.1.3(1), Part B of the Rules as it pertains to “bearing temperature” means either of the following monitoring and measuring devices is to be provided for measuring the temperature of the metal at the aft end bottoms of stern tubes:

- (1) Two or more temperature sensors embedded into the metal
- (2) An embedded temperature sensor which can be replaced from inside the ship and a spare temperature sensor.

In such cases, replacement by the spare sensor is to be demonstrated according to the procedures submitted beforehand.

5 The wording “properly monitored” in 8.1.3(2), Part 2 of the Rules as it pertains to “bearing

temperature” means that at least one device is to be provided for measuring the temperature of the metal at the aft end bottoms of stern tubes.

Table 2.8.1.3-1 has been amended as follows.

Table 2.8.1.3-1 Approval procedure of preventive maintenance system for oil lubricated propeller shafts

Item	Procedures
1. General	These Procedures will apply to ships intended for the preventative maintenance of propeller shafts as specified in 8.1.3, Part 2 of the Rules . This system permits the shipowners to maintain the shafts using preventive measures such as by carrying out lubricating oil analysis regularly and diagnosing the lubricating condition of the shaft based on the results.
2. Application	<p>-1 The executive management (hereinafter referred to as a “management”) responsible for adopting the preventive maintenance system according to the Procedures is to submit to the Society three copies of the maintenance manual specifying at least the following items.</p> <ol style="list-style-type: none"> (1) Management’s policy for implementing the preventive maintenance system (2) Procedures and personnel responsible for sampling oil, monitoring parameters such as oil analysis results and recording the necessary data (3) Procedures and personnel responsible for selecting and controlling the analytical testing machines (or testing laboratory) and the measuring devices for monitoring parameters (4) Procedures and personnel responsible for review of each parameter monitored and diagnosing the lubricating condition thereby (5) Procedures and personnel responsible for handling any abnormalities found (including those for reporting to the Society) (6) Procedures and personnel responsible for ensuring that proper maintenance is carried out according to the maintenance manual <p>-2 The Society returns two copies of the documents to the applicant after review and approval. The management is to keep one copy of the approved documents on board the ship and the other copy of the approved documents either on hand or at the shipowner’s office.</p> <p>-3 The application is to be submitted within <i>6 months</i> from the date of completion of the Classification Survey or the previous Ordinary Survey of the propeller shaft. However, this <i>6 month</i> period may be waived in cases where supplementary documentation confirming the soundness of the propeller shafting system is submitted.</p>
3. Approval and Notation	The Society examines the documents submitted and bases its approval on items such as the management system, the maintenance procedures and the criteria for parameters (including the criteria for alarm and abnormal conditions) of oil analysis results. The Society assigns approved ships with the notation (PSCM or <u>PSCM • A</u>) as classification characters.
4. Approval Conditions	<p>-1 Management system</p> <ol style="list-style-type: none"> (1) The management is to state clearly that it will take responsibility for proper implementation of the preventive maintenance of the related parts according to the manual and familiarize the crew concerned with the procedures. (2) The management is to verify that parameters such as oil analysis results are all within their limits and to take suitable measures as necessary. The management is to report to the Society immediately where any abnormality is found. (3) The management is to verify that suitable maintenance is carried out according to the manual. (4) The items monitored or reviewed according to the manual are to be recorded. <p>-2 Maintenance procedures</p> <ol style="list-style-type: none"> (1) Oil sampling for analytical testing Oil sampling for analytical testing is to be carried out regularly at the intervals of at least <i>6 months</i> and the procedures are in accordance with the following. <ol style="list-style-type: none"> (a) Sampling is to be carried out at sea as much as possible. The sampling oil quantity is about <i>200 ml</i> and it is to be always from a fixed place after fully draining. For example, the air purge pipe at the pump exit or oil sample cock; places where the sampled oil can be representative of the system. (b) Where the sampling can only be conducted at port, the sampling is to be carried out after sufficient circulation of the oil with an oil pump if one is available, and according to the method in (a) above.

Otherwise, the oil is to be sampled from a few points at different levels and all the samples are mixed together as the testing sample.

(2) Monitoring and recording of parameters

Monitoring and recording of each parameter is to be properly carried out and the following data is to be recorded at each sampling.

- (a) Temperature of the circulation oil
- (b) Temperature of the aft stern tube bearing
- (c) Sampling date, service oil name, service hours, total oil quantity and oil consumption rate (*l/day*)

(3) Testing machines and measuring devices for monitoring parameters

The testing machines and measuring devices for monitoring the parameters specified in **8.1.3, Part 2 of the Rules** are to have their accuracy confirmed and calibrated properly.

-3 Criteria for parameters

The management is to determine the criteria for each parameter for the ship based on the reference standards below and by taking into account its experience and knowledge.

(1) Oil analysis

(a) Analytical items and methods:

Refer to **Table 1** as a standard. However, alternative analytical items and methods can be adopted instead where deemed appropriate by the Society.

Table 1 Standard criteria (Reference)

analytical items	max. values	analytical methods
Fe (<i>ppm</i>)	50	ICP (SOAP)
Sn (<i>ppm</i>)	20	ICP (SOAP)
Pb (<i>ppm</i>)	20	ICP (SOAP)
Na (<i>ppm</i>)	80	ICP (SOAP)
IR Oxidation @ 5.85 μm (<i>Abs. unit/cm</i>)	10	FT-IR
Separated Water (%)	1	Visual(24 settling hrs)

(b) Standard criteria:

To be within the max. values specified in **Table 1** counting from the values of the new oil

(c) Alarm values:

To be less than double the standard criteria (where any parameter exceeds the alarm value, the testing oil is to be re-sampled and re-analysis for all the items is to be carried out immediately)

(2) Lubricating oil consumption rate:

2 *l/day* or less

(3) Temperature at aft. stern tube bearing:

55°C or less

(4) Wear down for oil lubricated bearing:

0.3 *mm* or less

5. After Approval

-1 The parameters are to be monitored and recorded onboard the ship in accordance with the approved manual, and the lubricating condition of the propeller shafts is to be diagnosed thereby. Where any abnormality is found, the management is to report it to the Society as soon as possible and withdraw the shaft for a thorough examination or carry out maintenance to the shaft as necessary.

-2 The management is to ~~submit~~ maintain onboard the analysis records of the analysis with the data specified 4.-2(2) after every analysis of the sample oil. In the documents, the management's opinion, such as on the necessity for withdrawing the propeller shaft, is to be included.

-3 The Society will carry out general examinations on the related propeller shafting parts and review each record of parameters monitored at the ship's periodical surveys to verify that appropriate maintenance is carried out in compliance with the approved manual, and notify the ship's management of any necessary maintenance. Where any abnormality or improper maintenance is found out through the examination, the management is required to apply for an Open-up Survey of the propeller shaft.

-4 The ship is to undergo the examinations specified in **Table 2.8.1, Part 2 of the Rules** (excluding survey items 2, 3 and 5 for parts covered by the preventive maintenance system) at the propeller shaft surveys in accordance with **1.1.3-1(6), Part 2 of the Rules**. However, for propeller shafts with keyless propeller attachments or having coupling flanges at the aft end, survey items 1, 6 and 7 in **Table 2.8.1, Part 2 of the Rules** may be extended until the earlier date of the following (1) or (2);

	<p>(1) The date when the propeller shaft is withdrawn for an examination due to some reason such as an abnormality being found by the analysis of monitoring parameters</p> <p>(2) The date six <i>years</i> after the propeller shaft survey (excluding survey items 1, 6 and 7 in Table 2.8.1, Part 2 of the Rules) was completed</p>
6. Cancellation of Approval	<p>Where the following -1 to -3 is applicable, the Society may cancel the ship's approval to adopt the preventive maintenance system for the propeller shaft. In this case, the Society notifies the ship's management of the cancellation, and the ship is to undergo the propeller shaft survey immediately in accordance with the requirements of 8.1.1, Part 2 of the Rules.</p> <p>-1 Where any improper conduct is found regarding entries in the records such as for oil analysis results.</p> <p>-2 Where it is regarded by the Society that proper maintenance is not carried out according to the approved manual.</p> <p>-3 Where the shipowner or ship management company has changed, or cancellation of the approval to adopt the preventive maintenance system has been requested by the ship's management.</p>

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 8 May 2015.

Part 7 MACHINERY INSTALLATIONS

Chapter 6 TORSIONAL VIBRATION OF SHAFTINGS

6.2 Allowable Limit

6.2.6 Detailed Evaluation for Strength

Sub-paragraph -3 has been amended as follows.

3 In cases where intermediate shafts with longitudinal slots given in **Table 7.6.1, Chapter 6, Part 7 of the Rules** are equipped, the value of C_K may be determined by using the following formulae:

$$C_K = 1.45/scf$$

$$scf = \alpha_{t(hole)} + 0.80 \frac{(l-e)/d_a}{\sqrt{\left(1 - \frac{d_i}{d_a}\right) \frac{e}{d_a}}}$$

Where:

scf : Stress concentration factor at the end of slots defined as the ratio between the maximum local principal stress and $\sqrt{3}$ times the nominal torsional stress determined for the hollow shafts without slots (Values obtained through Finite Element Calculation may be used as well)

l : Slot length

e : Slot width

d_i : Inside diameter of the hollow shaft at the slot

d_a : Outside diameter of the hollow shaft

$\alpha_{t(hole)}$: Stress concentration factor of radial holes (in this context, e = hole diameter) determined by the following formula (an approximate value of 2.3 may be used as well)

$$\alpha_{t(hole)} = 2.3 - 3 \frac{e}{d_a} + 15 \left(\frac{e}{d_a} \right)^2 + 10 \left(\frac{e}{d_a} \right)^2 \left(\frac{d_i}{d_a} \right)^2$$

Part 9 FIRE PROTECTION, DETECTION AND EXTINCTION

Chapter 3 PROBABILITY OF IGNITION

3.5 Special Requirements for Tank Barges

3.5.8 Gas Measurement

Sub-paragraphs -3 to -5 have been added as follows.

3 The words “cargo tanks” in the phrase “spaces adjacent to the cargo tanks” in 3.5.8(3)(a), Part 9 of the Rules includes slop tanks except those arranged for the storage of oily water only.

4 The word “spaces” in the phrase “spaces under the bulkhead deck adjacent to cargo tanks” in 3.5.8(3)(a), Part 9 of the Rules includes dry compartments such as ballast pump-rooms and bow thruster rooms and any tanks such as freshwater tanks, but excludes fuel oil tanks.

5 The word “adjacent” in the phrase “adjacent to the cargo tanks” in 3.5.8(3)(a), Part 9 of the Rules includes ballast tanks, void spaces, other tanks or compartments located below the bulkhead deck located adjacent to cargo tanks and includes any spaces or tanks located below the bulkhead deck which form a cruciform (corner to corner) contact with the cargo tanks.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 1 July 2015.
2. Notwithstanding the amendments to the Guidance, the current requirements may 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.

Part 2 CLASS SURVEYS

Chapter 2 CLASSIFICATION SURVEYS

2.3 River Trials and Stability Experiments

2.3.1 River Trials

Sub-paragraph -2 has been amended as follows.

2 The Steering test and change-over test from main to auxiliary steering gears required by **2.3.1-1(2), Part 2 of the Rules** are to be carried out in accordance with the following (1) through **(98)** in addition to **2.3.1-2, Part 2 of the Rules**. However, the tests required in **(54), (65), (76), (87)** and **(98)** may be dispensed with where such tests have been carried out either at dockside or in dry dock.

~~(1) Tests of the steering capabilities specified in **12.2.2** and **12.2.3, Part 7 of the Rules**. Where the ship cannot be tested in the full load condition, the ship is to be tested in accordance with any of the following except in cases where specially provided for by the flag state. In such cases, the ship speed at maximum continuous revolutions of the main engine is to be used instead of the speed specified in **2.1.9, Part 1 of the Rules**. If the ship is fitted with a controllable pitch propeller, the main steering gear test is to be carried out at the maximum design pitch approved by the Society for the number of maximum continuous revolutions.~~

~~(a) Tests are to be carried out on the condition that the rudder is fully submerged (at zero speed waterline) and the vessel is in an acceptable trim condition.~~

~~(b) Tests are to be carried out on the condition that rudder load and torque at the trial loading condition have been reliably predicted and extrapolated to the full load condition.~~

(21) Running tests of the power units, including transfer between power units

(32) Tests of the emergency power supply required by **12.2.6, Part 7 of the Rules**

(43) Operation tests of controls, including change-over between two control systems, change-over between the control system and the controller provided in the steering gear compartment, and change-over between automatic steering and manual steering

(54) Tests of the means of communication between the navigating bridge and the engine room, and between the engine room and the steering gear compartment

(65) Function tests of indicators for alarms, rudder angle indicator and power units required by **Chapter 12, Part 7 of the Rules**

(76) Function tests of indicators for operating condition of electric motor and relief valves for preventing overpressure

(87) Function tests of the rudder stoppers

(98) Where the steering gear is designed to avoid hydraulic locking, a demonstration of this feature

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 1 January 2016.
2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.

(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 1%* of the estimated mass of all structural material, whichever is the less.