

Anchor equipment for small ships

Object of Amendment

Rules for the Survey and Construction of Steel Ships Parts B and CS
Guidance for the Survey and Construction of Steel Ships Part CS

Reason for Amendment

IACS Unified Requirement (UR) A1 concerning anchor equipment has been periodically reviewed over the years since its initial publication in 1982, and amendments to it have been incorporated into the NK Rules at such times.

In 2023, IACS reviewed UR A1 and the related Recommendation (Rec) No.10 concerning anchor equipment to clarify their application to small ships and to also establish common standards for anchor equipment requirements. As a result of this review, IACS adopted UR A1(Rev.8) and Rec.10(Rev.5) in June 2023 to define alternative selection methods for anchors and chains on small ships, and also provide clear usage conditions for wire ropes.

Accordingly, relevant requirements are amended based on UR A1(Rev.8) and Rec.10(Rev.5).

Outline of Amendment

- (1) Clarification of requirements for the selection of anchors and chains based on IACS UR A1.
- (2) Clarification of requirements for wire rope substitute conditions for chains based on IACS Rec 10.

Effective Date and application

This amendment applies to ships for which the date of contract for construction is on or after 1 July 2024.

ID: DX23-11

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

Amended-Original Requirements Comparison Table (Anchor equipment for small vessels)

Amended	Original	Remarks
<p align="center">RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS</p> <p align="center">Part B CLASS SURVEYS</p> <p align="center">Chapter 2 CLASSIFICATION SURVEYS</p> <p>2.1 Classification Survey during Construction</p> <p>2.1.6 Documents to be Maintained On Board*</p> <p>1 At the completion of a classification survey, the Surveyor confirms that the finished versions of the following applicable drawings, plans, manuals, lists, etc., are on board.</p> <p>(1) (Omitted)</p> <p>(2) Other documents (a) to (z) are omitted.)</p> <p><u>(aa) guidance for maintenance and inspection of steel wire</u> <u>(Part CS 23.1.4)</u></p> <p align="center">EFFECTIVE DATE AND APPLICATION</p> <p>1. The effective date of the amendments is 1 July 2024.</p> <p>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.</p> <p>* “contract for construction” is defined in the latest version of IACS Procedural Requirement (PR) No.29.</p>	<p align="center">RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS</p> <p align="center">Part B CLASS SURVEYS</p> <p align="center">Chapter 2 CLASSIFICATION SURVEYS</p> <p>2.1 Classification Survey during Construction</p> <p>2.1.6 Documents to be Maintained On Board*</p> <p>1 At the completion of a classification survey, the Surveyor confirms that the finished versions of the following applicable drawings, plans, manuals, lists, etc., are on board.</p> <p>(1) (Omitted)</p> <p>(2) Other documents (a) to (z) are omitted.)</p> <p>(aa) (Newly added)</p>	<p>IACS URA1(Rev.8) A1.5.1.3(e)</p>

Amended-Original Requirements Comparison Table (Anchor equipment for small vessels)

Amended	Original	Remarks
<p style="text-align: center;">IACS PR No.29 (Rev.0, July 2009)</p> <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> (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. <p>Note: This Procedural Requirement applies from 1 July 2009.</p>		

Amended-Original Requirements Comparison Table (Anchor equipment for small vessels)

Amended	Original	Remarks
<p align="center">Part CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS</p> <p align="center">Chapter 23 EQUIPMENT</p> <p>23.1 Anchors and Chain Cables</p> <p>23.1.1 General</p> <p align="center">Table CS23.1 Anchors, Chain Cables and Ropes (Omitted)</p> <p>Notes:</p> <ol style="list-style-type: none"> Length of chain cables may include shackles for connection. <u>Alternative methodology using direct force calculation for anchoring equipment described in Appendix B of IACS Recommendation No. 10 may be used. Dredgers are excluded.</u> 	<p align="center">Part CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS</p> <p align="center">Chapter 23 EQUIPMENT</p> <p>23.1 Anchors and Chain Cables</p> <p>23.1.1 General</p> <p align="center">Table CS23.1 Anchors, Chain Cables and Ropes (Omitted)</p> <p>Notes:</p> <ol style="list-style-type: none"> Length of chain cables may include shackles for connection. (Newly added) 	<p>IACS UR A1(Rev.8) A1.2.4 A1.3.2</p>
<p>23.1.3 Anchors</p> <p>5 <u>For tugs under 45 m in length intended for towing service only, one anchor may be used onboard provided that the second anchor and its relevant chain cable holds readily available to be installed. In case of loss of anchor, the tug is to remain in port until replace anchor equipment is installed onboard.</u></p>	<p>23.1.3 Anchors (Newly added)</p>	

Amended-Original Requirements Comparison Table (Anchor equipment for small vessels)

Amended	Original	Remarks
<p>23.1.5 Chain Lockers 7 It is recommended that 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% but not more than 30% of the breaking load of the chain cable.</p> <p align="center">EFFECTIVE DATE AND APPLICATION</p> <ol style="list-style-type: none"> The effective date of the amendments is 1 July 2024. 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. <p>* “contract for construction” is defined in the latest version of IACS Procedural Requirement (PR) No.29.</p> <p align="center">IACS PR No.29 (Rev.0, July 2009)</p> <ol style="list-style-type: none"> 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. 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. <p>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:</p> <ol style="list-style-type: none"> such alterations do not affect matters related to classification, or 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. <p>The optional vessels will be considered part of the same series of vessels if the option is</p>	<p>23.1.5 Chain Lockers 7 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% but not more than 30% of the breaking load of the chain cable.</p>	<p>IACS Rec.10 1.3.2(a), (b)</p>

Amended-Original Requirements Comparison Table (Anchor equipment for small vessels)

Amended	Original	Remarks
<p>exercised not later than 1 year after the contract to build the series was signed.</p> <p>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.</p> <p>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.</p> <p>Note: This Procedural Requirement applies from 1 July 2009.</p>		

Amended-Original Requirements Comparison Table (Anchor equipment for small vessels)

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<p style="text-align: center;">GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS</p> <p>Part CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS</p> <p style="text-align: center;">CS23 EQUIPMENT</p> <p>CS23.1 Anchors, Chain and Ropes</p> <p>CS23.1.4 Chain Cables</p> <p>Wire ropes may be used in place of chain cables on ships <u>that do not intend to use their anchor in normal temporary anchoring operations or that uses anchoring equipment for positioning with a minimum of 4 points (e.g. for cable or pipe laying) as the following (1) to (5) are satisfied.</u></p> <p>(1) The length of the wire rope is to be equal to 1.5 <i>times</i> the corresponding length of chain cable specified in Table CS23.1, Part CS of the Rules and its strength is to be equal to that of a Grade 1 chain cable as specified in Table L3.5, Part L of the Rules.</p> <p>(2) <u>The anchor weight shall be increased by 25 % compared to anchor associated with chain cable according to Table CS23.1, Part CS of the Rule.</u></p> <p>(3) A short length of chain cable is to be fitted between the wire rope and anchor having a length of 12.5 <i>m</i> or the distance between anchor in its stowed position and the winch, whichever is less.</p>	<p style="text-align: center;">GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS</p> <p>Part CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS</p> <p style="text-align: center;">CS23 EQUIPMENT</p> <p>CS23.1 Anchors, Chain and Ropes</p> <p>CS23.1.4 Chain Cables</p> <p>Wire ropes may be used in place of chain cables on ships <u>less than 40 <i>m</i> in length as long as the following (1) to (3) are satisfied.</u></p> <p>(1) The length of the wire rope is to be equal to 1.5 <i>times</i> the corresponding length of chain cable specified in Table CS23.1, Part CS of the Rules and its strength is to be equal to that of a Grade 1 chain cable as specified in Table L3.5, Part L of the Rules.</p> <p>(Newly added)</p> <p>(2) A short length of chain cable is to be fitted between the wire rope and anchor having a length of 12.5 <i>m</i> or the distance between anchor in its stowed position and the winch, whichever is less.</p>	<p>IACS UR A1(Rev.8) A1.5.1.</p>

Amended-Original Requirements Comparison Table (Anchor equipment for small vessels)

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<p>(4) All surfaces coming into contact with the wire rope need to be rounded with a radius of not less than 10 <i>times</i> the wire rope diameter (including the stem).</p> <p>(5) <u>Steel wire shall be selected to fit for purpose based on the manufacturer recommendation and shall be provided with guidance for maintenance and inspection.</u></p> <p align="center">EFFECTIVE DATE AND APPLICATION</p> <p>1. The effective date of the amendments is 1 July 2024.</p> <p>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.</p> <p>* “contract for construction” is defined in the latest version of IACS Procedural Requirement (PR) No.29.</p> <p align="center">IACS PR No.29 (Rev.0, July 2009)</p> <p>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.</p> <p>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.</p> <p>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:</p> <p>(1) such alterations do not affect matters related to classification, or</p> <p>(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</p>	<p>(3) All surfaces coming into contact with the wire rope need to be rounded with a radius of not less than 10 <i>times</i> the wire rope diameter (including the stem).</p> <p>(Newly added)</p>	

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<p style="text-align: center;">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.</p> <p>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.</p> <p>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.</p> <p>Note: This Procedural Requirement applies from 1 July 2009.</p>		