Amendment on 27 June 2024
Resolved by Technical Committee on 30 January 2024

Approval and Shipping Tests for Container Securing Fittings

Object of Amendment

Rules for the Survey and Construction of Steel Ships Parts C, CS, and L
Guidance for the Survey and Construction of Steel Ships Part L
Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use

Reason for Amendment

The SOLAS Convention stipulates that strength test results for securing fittings are to be included in the Cargo Securing Manual.

As part of its appraisal services, ClassNK issues test certificates for container securing fittings on a case-by-case basis. However, in response to requests from several relevant industry members, ClassNK has decided to establish approval procedures and shipping test requirements for such products.

Accordingly, relevant requirements are amended to specify approval procedures and shipping test requirements for container securing fittings.

Outline of Amendment

(1) Specifies that ships carrying containers are to also carry container securing fittings for which a valid test certificate has been issued.
(2) Specifies requirements related to approval procedures and shipping tests for container securing fittings.

Effective Date and Application

(1) Parts C and CS of the Rules
This amendment applies to ships for which the date of contract for construction is on or after 1 January 2025.
(2) Part L of the Rules and Guidance
    1. This amendment applies to container securing fittings for which the application for survey is submitted to the Society on or after 27 June 2024.
    2. Notwithstanding the provision of preceding 1., this amendment may apply, upon request of manufacturer, to container securing fittings for which the date of application for survey is before the effective date.
(3) Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use
    1. This amendment applies to container securing fittings for which the application for approval is submitted to the Society on or after 27 June 2024.
    2. Notwithstanding the provision of preceding 1., this amendment may apply, upon request of manufacturer, to container securing fittings for which the date of application for approval is before the effective date.

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

ID: DH23-15

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part C HULL CONSTRUCTION AND EQUIPMENT** **Part 2-1 CONTAINER CARRIERS** **Chapter 14 EQUIPMENT**	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part C HULL CONSTRUCTION AND EQUIPMENT** **Part 2-1 CONTAINER CARRIERS** **Chapter 14 EQUIPMENT**	
14.2 Container Securing Systems **14.2.1 Container Securing Fittings** **14.2.1.1** Fittings used for container securing (hereinafter, this is to include loose securing fittings and fixed securing fittings except where specified otherwise) are to be provided with either a test certificate issued in accordance with **Chapter 9, Part L** or a test certificate deemed by the Society as being equivalent thereto.	(Newly added)	

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
Part 2-2 BOX-SHAPED BULK CARRIERS **Chapter 10 ADDITIONAL STRUCTURAL REQUIREMENTS** **10.6 Other** **10.6.4 Ships Loaded with Containers** **10.6.4.1 Container Loading Reinforcement** Decks below container corner fittings are to be constructed (e.g. provided with girder plates) to effectively support the loads of containers. **Chapter 14 EQUIPMENT** **14.1 Container Securing Systems** **14.1.1 Container Securing Fittings** **14.1.1.1** Fittings used for container securing are to comply with **14.2.1.1, Part 2-1.**	**Part 2-2 BOX-SHAPED BULK CARRIERS** **Chapter 10 ADDITIONAL STRUCTURAL REQUIREMENTS** **10.6 Other** (Newly added) (Newly added)	

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
Part 2-5 GENERAL CARGO SHIPS AND REFRIGERATED CARGO SHIPS	**Part 2-5 GENERAL CARGO SHIPS AND REFRIGERATED CARGO SHIPS**	
Chapter 14 EQUIPMENT	(Newly added)	
14.1 Container Securing Systems		
14.1.1 Container Securing Fittings		
14.1.1.1 Fittings used for container securing are to comply with **14.2.1.1, Part 2-1.**		
EFFECTIVE DATE AND APPLICATION 1. The effective date of this amendment is 1 January 2025. 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.		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS** **Chapter 23 EQUIPMENT** **23.4 Container Securing Systems** **23.4.1 Container Securing Fittings** **23.4.1.1** Fittings used for container securing are to comply with **14.2.1.1 Part C, Part 2-1**. EFFECTIVE DATE AND APPLICATION **1.** The effective date of this amendment is 1 January 2025. **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.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part CS HULL CONSTRUCTION AND EQUIPMENT OF SMALL SHIPS** **Chapter 23 EQUIPMENT** (Newly added)	

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part L EQUIPMENT** **Chapter 1 GENERAL** **1.4 Testing and Inspection for Equipment** **1.4.1 Execution of Testing and Inspection*** **1** Testing and inspection for equipment specified in this Part are to be carried out in the presence of the Surveyor at the works prior to delivery except where otherwise specially provided~~,~~ and are to comply with the requirements of **Chapters 2** to **9** in this Part. **2** The testing machines used for the mechanical testing of material are to be those which have the effective certificates issued by the Society or other organization recognized by the Society in accordance with the "**Rules for Testing Machines**" or other standards deemed appropriate by the Society. **3** The Society may dispense with the tests and inspections for equipment having the appropriate certificates. **4** The Society may modify the requirement of presence of testing and inspection by the Surveyor where the quality of equipment and the quality control system of manufacturer are deemed appropriate by the Society.	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part L EQUIPMENT** **Chapter 1 GENERAL** **1.4 Testing and Inspection for Equipment** **1.4.1 Execution of Testing and Inspection*** **1** Testing and inspection for equipment specified in this Part are to be carried out in the presence of the Surveyor at the works prior to delivery except where otherwise specially provided~~,~~ and are to comply with the requirements of **Chapter 2** to **8** in this Part. **2** The testing machines used for the mechanical testing of material are to be those which have the effective certificates issued by the Society or other organization recognized by the Society in accordance with the "**Rules for Testing Machines**" or other standards deemed appropriate by the Society. **3** The Society may dispense with the tests and inspections for equipment having the appropriate certificates. **4** The Society may modify the requirement of presence of testing and inspection by the Surveyor where the quality of equipment and the quality control system of manufacturer are deemed appropriate by the Society.	

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
1.4.2 Standard for Testing and Inspection **1** The equipment are to comply with the requirements of Chapters 2 to 9 in this Part. **2** Equipment differing from those specified in this Part are to be tested and inspected according to the approved specifications or standards for the testing. **3** The Society may request tests under different conditions or different kind of tests specified in this Part in consideration of the intended service condition of the equipment.	**1.4.2 Standard for Testing and Inspection** **1** The equipment are to comply with the requirements of Chapters 2 to 8 in this Part. **2** Equipment differing from those specified in this Part are to be tested and inspected according to the approved specifications or standards for the testing. **3** The Society may request tests under different conditions or different kind of tests specified in this Part in consideration of the intended service condition of the equipment.	
Chapter 9 CONTAINER SECURING FITTINGS	(Newly added)	
9.1 Container Securing Fittings		
9.1.1 Application **1** Fittings used for container securing (hereinafter, this includes loose securing fittings and fixed securing fittings except where specified otherwise) are to be in compliance with this chapter or are to be of an equivalent quality. **2** This chapter applies to fittings made from castings, forgings or rolled steel manufactured by an assembly process (including welding). **3** Fittings for which complying with chapter is difficult special shapes or materials are to be as deemed acceptable by the Society. **4** This chapter does not apply to structures such as lashing bridges, container stanchions and cell guides, and container corner castings.		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
9.1.2 Terms **1** "Fixed container fitting" means those fittings (e.g. deck sockets, eye plates, container guides and positioning cones) attached to structural members such as deck plates by welding or other means in order to transmit securing force to loose securing fittings used to secure containers. **2** "Loose securing fitting" means removable fittings (e.g. lashing rods, turnbuckles and twist locks) provided to transmit securing force between containers or between a container and fixed securing fittings. **9.1.3 Materials*** **1** Materials used for fittings are to comply with **Part K** or be deemed by the Society as being equivalent thereto. **2** The chemical composition of materials used for fixed securing fittings is, in principle, to have a carbon content of 0.23 % or less, taking weldability into consideration. **3** For materials used for fittings used in low temperature environments, special consideration is to be given to material toughness. **9.1.4 Heat Treatment** Fittings made from castings or forgings are, in principle, to be heat treated by either normalising or quenching and tempering, except in cases where specifically approved by the Society. **9.1.5 Manufacturing Processes and Product Shape*** The manufacturing process, safe working load (*SWL*), proof test load, breaking test load, structure, shape, dimensions, materials,		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
etc. of fittings are to be approved in advance by the Society, and manufacturers are not to change such plans without the Society's approval. **9.1.6 Dimensional Measurements** **1** Manufacturers are responsible for the dimensional measurements of fittings and are to present records of such measurements to surveyors. **2** Based on submitted measurement records, surveyors are to verify that actual dimensions meet manufacturer specifications. **9.1.7 Visual Inspections** Before conducting proof tests, the external appearances of fittings are to be inspected to confirm that they are in good order. **9.1.8 Proof Tests** **1** A lot consists of 50 pieces of the same type and model of fittings and proof tests are to be carried out on any one piece of each lot. Even if the number of pieces is less than 50, tests are to be carried out on at least one piece. **2** Proof test loads are to be at least equal to or greater than the proof test load applied to the same type at the time of the approval test. The direction of loading is to be in accordance with *ISO* 3874. **3** Test loads are to be applied in the presence of a surveyor, and it is to be confirmed after unloading that there is no permanent deformation or abnormalities. **4** When permanent deformation or abnormalities are confirmed in the preceding **3**, the Society may permit a re-test as it deems appropriate.		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
9.1.9 Records Manufacturers are to submit test reports for each type of fitting that has passed the specified tests and inspections, and such reports are to include, depending on the type of fitting, the following items. (1) Fitting type and model (2) Fitting description (reference drawings including length, diameter, etc. are acceptable) (3) Number of tests conducted (4) Test load direction (5) Proof test load (6) Safe working load (*SWL*) **9.1.10 Test Certificates** The Society issues certificates for fittings which have passed the specified tests and inspections, and such certificates include the following information. (1) Manufacturer name and manufacturing facility location (2) Applicant name (3) Test and inspection dates (including test location) (4) Test results (5) Marking items on the approved products (6) Other items deemed necessary (7) Serial number		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 27 June 2024. **2.** Notwithstanding the amendments to the Rules, the current requirements apply to container securing fittings for which the application for survey is submitted to the Society before the effective date. **3.** Notwithstanding the provision of preceding **2.**, the amendments to the Rules may apply to container securing fittings for which the application is submitted to the Society before the effective date upon request by the manufacturer.		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part L EQUIPMENT** **L9 CONTAINER SECURING FITTINGS** **L9.1.3 Materials** The wording "special consideration" in **9.1.3-3, Part L of the Rules** means that impact tests are to be carried out in accordance with **12.4.4, Chapter 12, Part 2 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** to confirm notch toughness at the design temperature of the ship provided with the fittings at the time of "Society's approval" referred to in **9.1.5, Part L of the Rules**. **L9.1.5 Manufacturing Processes and Product Shapes** The wording "Society's approval" in **9.1.5, Part L of the Rules** means obtaining approval in accordance with **Chapter 12, Part 2 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**.	**GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part L EQUIPMENT** (Newly added)	

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 27 June 2024. **2.** Notwithstanding the amendments to the Guidance, the current requirements apply to container securing fittings for which the application for survey is submitted to the Society before the effective date. **3.** Notwithstanding the provision of preceding **2.**, the amendments to the Guidance may apply to container securing fittings for which the application is submitted to the Society before the effective date upon request by the manufacturer.		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE **Part 2 EQUIPMENT** **Chapter 12 APPROVAL OF CONTAINER SECURING FITTINGS** **12.1 General** **12.1.1 Application** Approval procedures for fittings specified in **9.1.5, Part L of the Rules for the Survey and Construction of Steel Ships** are to be in accordance with this chapter. **12.2 Application Procedures** **12.2.1 Procedures and Forms** Approval application procedures are as follows. (1) Manufacturers of fittings are to submit an application form describing the type of fitting and a test plan to the Society for each manufacturing works, together with the relevant documents specified in **12.2.2.** (2) After examining the application forms, attached documents and test plans, the Society returns them to manufacturers.	**GUIDANCE FOR THE APPROVAL AND TYPE APPROVAL OF MATERIALS AND EQUIPMENT FOR MARINE USE** **Part 2 EQUIPMENT** (Newly added)	

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
12.2.2 Reference Data to be Submitted **1** Manufacturers are to submit an application for approval together with the following documents in addition to the application form and test plan. (1) Manufacturing method outline (2) Details on the quality control system of the manufacturing plant (3) Details on the product type, model name and other specifications (including safe working load ("*SWL*"), design breaking load and proof test load) (4) Structural drawings (including dimensions and tolerances) (5) Data on materials used (including test certificates) (6) Details on coating and corrosion protection (if applicable) (7) Instruction manuals as specified by the manufacturer (8) For fully automatic twist locks, documents describing the proper position of the twist lock lower coupling when attached to the corner fitting, the mechanism for preventing the twist lock from falling out, and the mechanism for automatic release from the corner fitting (9) Certificates of approval by other classification societies and related documents (if any). (10) Details of product inspections (including dimensional measurements, strength tests, mechanical tests and non-destructive testing) (11) Welding procedure manuals and workmanship certificates (if the welding process is included in the manufacture of the product) (12) Copies of certificates showing compliance with the **Rules for Approval of Manufacturers and Service Suppliers**		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
or the equivalent thereto, or copies of *ISO* 9000 series certification (if already certified by the Society). (13) Other documents deemed necessary by the Society **2** Where any part of manufacturing process is assigned to other works, additional information relevant to the name and address of the work in question together with the organisation and method of inspection for the materials of which the manufacturing process is assigned are to be included. **3** The submission of the data specified in **-1** may be omitted in cases where manufacturers have previously submitted such data to the Society. In such cases, manufacturers are to submit an application form together with the document to that effect. **12.3 Confirmation of Manufacturing and Quality Control Procedures** **12.3.1 Confirmation Surveys of Manufacturing Factories** The Society may carry out confirmation survey on facilities, manufacturing techniques, product quality control and inspection by manufacture of the manufacturing factory in order to verify the factory's ability of manufacturing product of stable quality upon examination of the documents listed in the preceding requirements. **12.4 Approval Tests** **12.4.1 Approval Tests** **1** The following tests are to be carried out on each of the three samples of the same model of fitting in the presence of a surveyor. Operational tests, however, only apply to fully automatic twist locks. (1) Dimensional measurements		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
(2) Visual inspections (3) Mechanical properties tests (4) Load tests (a) Proof tests (b) Breaking tests (5) Operational tests **12.4.2 Dimensional Measurements** **1** Dimensional measurements of fittings are the manufacturer's responsibility and records of such measurements are to be submitted to a surveyor. **2** Based on the submitted measurement records, the surveyor verifies that the dimensions meet the manufacturer specifications. **12.4.3 Visual Inspections** Before conducting load tests, the appearances of fittings are to be visually examined to confirm that they are in good order. **12.4.4 Mechanical Properties Tests** **1** One tensile test specimen and one set (three pieces) of impact test specimens are to be taken from samples in accordance with applicable material standards to verify compliance with the referenced specified values. **2** For fittings to be installed on ships intended to operate in areas with low air temperature in accordance with **3.2.2.2, Part 1, Part C of Rules for the Survey and Construction of Steel Ships** or on ships intended to carry cargoes with low temperature in accordance with **3.2.2.2, Part 1, Part C of Rules for the Survey and Construction of Steel Ships**, the impact tests specified in **-1** above are to be carried out at the design temperature of the ship onto		

Amended	Original	Remarks
which the fittings are to be installed. **12.4.5 Load Tests** **1** The test loads to be used for load tests are recommended to be the values given in **(1)** and **(2)** below, and the *SWL* and the actually applied test loads are to be submitted to the Society in accordance with **12.5**. (1) Proof test loads are to be 1.5 *times* or greater than the *SWL*. (2) Breaking test loads are to be design breaking loads, which are to be 2 *times* or greater than the *SWL*. **2** The *SWL* and design breaking load are to be in accordance with *ISO* 3874. However, this is not applicable if the designer requests a value different from the value specified in the relevant *ISO* standard. **3** The direction of loading is to be in accordance with *ISO* 3874. In cases where compressive loads are applied in service (e.g. twist locks or deck sockets), however, such loads are to also be applied in the compressive direction. **4** Test loads are to be applied in accordance with **-2** and **-3** above, respectively, and all samples are to be accepted if they satisfy the following conditions. (1) After proof tests, appearances and dimensions are to be measured and no damage or permanent deformation is to be found. (2) In the case of breaking tests, samples are to be able to withstand breaking test loads under loading conditions. **12.4.6 Operational Tests** Operational tests of fully automatic twist locks are to be in accordance with **Annex 2.8**.		

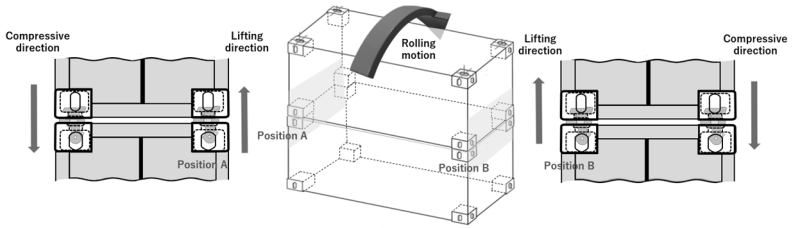
Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

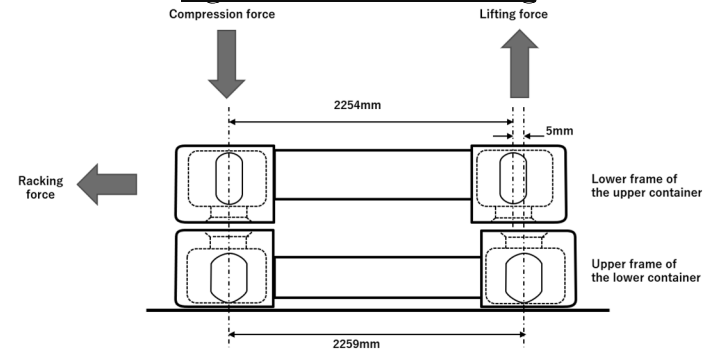
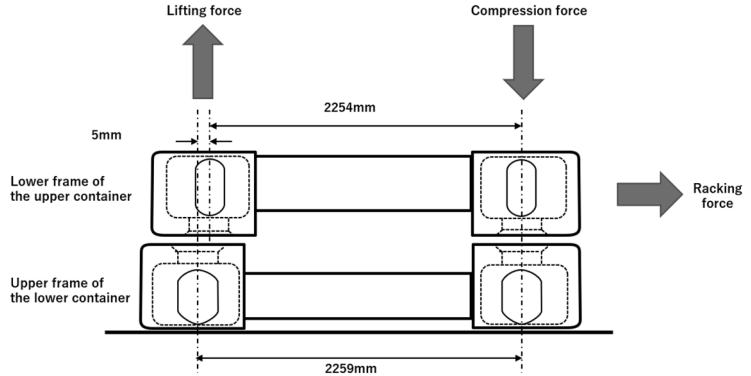
Amended	Original	Remarks
12.5 Submission of Test Reports **12.5.1 Test Reports** **1** After completion of the tests, manufacturers are to prepare test reports that include the test results and submit such reports to the Society after verification by a surveyor. **2** In addition to the type, model, etc. of the fitting, at least the following **(1)** through **(5)** items are to be included in the test reports specified in **-1 above**. (1) Dimensional measurement results (2) Visual inspection results (3) Mechanical properties test results (4) Load test results (including applied proof test loads, breaking test loads, directions of loading, and safe working loads (*SWL*)) (5) Operational test results (only for fully automatic twist locks) **12.6 Approval** **12.6.1 Notification of Approval** The Society approves fittings deemed appropriate on the basis of surveyor reports and documents submitted in accordance with relevant requirements. In such cases, a "Notice of Approval" that includes the approval number, approval date, approved items, etc. is issued. In addition, the Society stamps submitted data with its seal of approval and returns such data to applicants. **12.6.2 Validity of Approval** The valid term of the "Certificate of Approval" specified in		

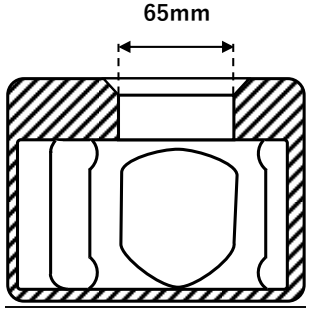
Amended	Original	Remarks
12.6.1 is five years from the date of approval. In cases where a renewal of approval is carried out in accordance with 12.6.3, the valid term will be five years from the day after the expiration date of the previous "Certificate of Approval". **12.6.3 Renewal of Approval and Changes in Approved Content** **1** In cases where changes have been made to the approved content of the "Certificate of Approval" specified in 12.6.1, applicants are to apply for renewal of approval in accordance with 12.2. In such cases, a copy of the "Certificate of Approval" and the documents specified in 12.2.2 are to be submitted together with an appropriate application form. However, the data to be submitted may be limited to reference data on the changes. **2** Renewal of approval is to be made within the period between six months prior to the expiry date of certificate of approval and the expiry date of certificate of approval. **3** In the case of application for renewal of approval as specified in -1 **above**, data are to be submitted. Such data are to include an accurate record of all manufacturing that has been performed since the last "Certificate of Approval" was issued. In such cases, the Society will conduct a factory inspection if needed. **4** The factory inspections specified in -3 **above**, in principle, are to be completed within the valid term of the "Certificate of Approval". However, under certain conditions and subject to Society approval, such factory inspections may be completed within a period of three months after the valid term has ended. **5** In cases where changes have been made to approved content, the Society is to be notified. The Society may require additional examinations if deemed necessary.		

Amended	Original	Remarks
6 In cases where changes have been made to the approved content specified in **-1 above**, the Society studies the details of the changes and carry outs factory inspections if needed. **7** The Society examines all submitted data and factory inspection reports. If the Society considers everything to be in order, the renewal of approval or changes to the approved content is recognised. However, in the case of any changes to the approved content, the valid term of the "Certificate of Approval", in principle, does not change. **12.6.4 Revocation of Approval** If any of the following **(1)** through **(4)** apply, the Society may, based on this chapter, revoke manufacturing process approval and give notice of this revocation to manufacturers. Manufacturers which receive a notice of revocation are required to return the "Certificate of Approval" in question to the Society. (1) In cases where any of the following **(a)** through **(e)** apply and manufacturers fail to take proper action despite Society requests for investigation, improvements, etc. (a) when instability in quality is found in tests and inspections, (b) when any harmful defects in the product are detected after product shipment, (c) when any damage to the product is recognized to have occurred during operation, (d) when any shortcomings in the quality control system or manufacturing control system are detected, and (e) when the approved content described on the "Certificate of Approval" specified in **12.6.1** has been changed without Society approval.		

Amended	Original	Remarks
(2) Manufacturers have not carried out renewal of approval according to **12.6.3.** (3) Manufactures request revocation. (4) Manufacturers do not pay approval fees.		
Annex 2.8 Procedures for Operational Tests of Fully Automatic Twist Locks	(Newly added)	
1.1 General		
1.1.1 General		
1 This annex specifies test procedures and inspections to verify that fully automatic twist locks to be approved have adequate strength. Tests are to be carried out using test jigs that reproduce the conditions of container fastening on board ship, and by applying test loads that reproduce the forces generated in fully automatic twist locks by the rolling and vertical motions of ships during navigation.		
2 Since fully automatic twist locks have an asymmetrical shape, when containers are subjected to lateral movement as shown in **Fig. 2.8-1**, the directions of the fixing mechanisms at the bottoms of fully automatic twist locks and the contact surfaces with corner fittings are different at positions *A* and *B* of containers. The purpose of this test, therefore, is to evaluate the fastening ability of the fully automatic twist lock by means of test jigs that imitate both conditions.		

Amended	Original	Remarks
Fig. 2.8-1 Loading Direction Considered in Operational Test  **1.1.2 Application** The tests specified in this annex apply to fully automatic twist locks used for securing containers. Other test procedures different from that specified in this annex may be allowed upon manufacturer request in case where Society is satisfied that such procedures are at least equivalent thereto. **1.2 Operational Tests** **1.2.1 Test Preparation** **1** Test jigs consist of a test jig reproducing the lower frame of the upper container end edge (i.e. the upper test jig) and a test jig reproducing the upper frame of the lower container end edge (i.e. the lower test jig). **Fig. 2.8-2** shows an overview of a test jig. **2** The upper and lower test jigs are placed at the end of a solid beam or other connecting member, using corner fittings conforming to *ISO* standards. If the corner fittings to be placed on the lower test jig are firmly fixed to the test stand, it is not necessary to attach a connecting jig. **3** The distance between the centres of the corner fittings of the lower test jig is to be 2,259 *mm*, and the distance of the upper test jig		

Amended	Original	Remarks
is to be 2,254 *mm*. **4** The top and bottom openings of all corner fittings used in the test are to be 65 *mm* (*See* **Fig. 2.8-3**). Fig. 2.8-2 Overview of Test Jig  (a) Evaluation of Position A  (b) Evaluation of Position B		

Amended	Original	Remarks
Fig. 2.8-3Corner Fittings Used for Upper and Lower Test Jigs.  **1.2.2 Tests and Inspections** **1** Tests are to be carried out on three fully automatic twist locks (hereinafter referred to as "samples") of the same model as the model to be approved in the presence of a surveyor in accordance with the following procedures. (1) Using a test jig modelled after position *A*, place the samples at the position where the lifting load is to be applied. Note that fully automatic twist locks, which are placed in positions to apply compressive loads, are not subject to evaluation in this test. (2) The test load is to be applied in the following **(a)** through **(d)** order, using hydraulic or equivalent load-loading equipment. The direction of loading is to be in the direction shown in **Fig. 2.8-2.** The loads applied according to **(b)** and **(c)** are to be maintained until the load in the lifting direction is applied. (a) Before applying the test load, the test jig is to be moved horizontally to bring the fully automatic twist lock into contact with the corner fitting.		

Amended-Original Requirements Comparison Table (Approval and Shipping Tests for Container Securing Fittings)

Amended	Original	Remarks
(b) At the position shown in **Fig. 2.8-2**, apply a load of 350 *kN* in the compressive direction. (c) At the position shown in **Fig. 2.8-2**, apply a load of 150 *kN* in the shear direction. (d) At the position shown in **Fig. 2.8-2**, apply a load of 275 *kN* in the lifting direction. (3) After loading according to **(2)** above, unload the sample, measure its appearance and dimensions and confirm that there is no permanent deformation or defect in the specimen. (4) Using a test jig that reproduces position *B*, load and evaluate the samples according to **(2)** and **(3)** above. **2** In cases where the Society agrees that the test conditions at position *B* are ensured by the test conditions at position *A* in consideration of the geometry of the samples, the test at position *B* may be omitted. EFFECTIVE DATE AND APPLICATION **1.** The effective date of the amendments is 27 June 2024. **2.** Notwithstanding the amendments to the Guidance, the current requirements apply to container securing fittings for which the application for approval is submitted to the Society before the effective date. **3.** Notwithstanding the provision of preceding **2.**, the amendments to the Guidance may apply to container securing fittings for which the application is submitted to the Society before the effective date upon request by the manufacturer.		