C7 Approval and Certification of Container Securing Systems

(May 2024)

C7.1 General

All seagoing dedicated container ships are to comply with these minimum requirements.

It is important for the safety of the ship and the protection of the cargo and personnel that the cargo is secured properly especially accounting for strength of the supporting structures and securing fittings. Hereto, a scope containing the following for approval and/or certification of container securing systems is defined:

- fixed and portable container securing fittings;
- arrangement plan of fixed container securing fittings;
- drawings of container supporting structures (container stanchions, hatch covers, lashing bridges, and cell guides, if any);
- cargo safe access plan;
- container stowage and securing plan;
- lashing software.

C7.2 Fixed and Portable Container Securing Fittings

Fixed container securing fittings are used to secure and support containers and are permanently welded to the ship structure.

Portable[1] container securing fittings are used to secure containers and are not categorised as fixed container securing fittings.

Minimum Breaking Load corresponds to the minimum load at which the first crack appears in the tested representative samples.

Minimum Proof Load corresponds to the test load specified by the Rules of the Society below which visible permanent deformation is not allowed.

C7.2.1 Drawings

Drawings of fixed and portable container securing fittings showing dimensions, materials, design loads, and manufacturer's markings are to be approved in accordance with the Rules of the Society.

Note:

1. This Unified Requirement is to be uniformly implemented by IACS Societies on ships contracted for construction on or after 1 July 2025.

2. The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.

---

[1] "Portable" and "loose" container securing fittings are used interchangeably in different container securing contexts.

C7
(cont)

C7.2.2 Prototype Testing

Each fixed and portable container securing fitting type is subject to prototype testing to determine the minimum breaking loads.

The minimum breaking load obtained from prototype testing is to be equal to or exceed the design minimum breaking load.

C7.2.3 Production Testing

Fixed and portable container securing fittings are subject to production testing prior to delivery or installation.

A number of samples from a batch of the container securing fittings is to be loaded to minimum proof load of the fittings, as per the Rules of the Society.

The production testing approval documents of delivered container securing fittings are to be kept on board and may be included in the approved Cargo Securing Manual.

C7.2.4 Arrangement Plan of Fixed Container Securing Fittings

The plan detailing the arrangement of the fixed container securing fittings is to be approved. The arrangement plan is to include the following for all areas where the fittings are installed:

- The type of fixed container securing fittings such as container foundations[2] and lashing eye plates
- Unambiguous location of installed fittings such as their location relative to clearly described locations of the ship structures.

C7.3 Drawings of Container Supporting Structures

The drawings of the structures necessary for conducting container stowage and securing are subject to approval.

The drawings are to be detailed enough to allow their model generation for structural analyses.

A plan is to be provided showing all relevant design loads for structural assessment of the container supporting structures and their foundations.

Structures involved in container stowage and securing include:

- hatch covers;
- container stanchions[3];
- lashing bridges;
- cell guides.

[2] Container foundations are called twistlock foundations, or base foundations in different container securing contexts. Likewise, “foundation” and “socket” are used interchangeably.
[3] Container stanchions are called container stools, or container pedestals in different container securing contexts.

C7
(cont)

C7.4 Cargo Safe Access Plan

The cargo safe access plan is to be examined for its compliance with the requirements prescribed in MSC.1/Circ.1353/Rev.2.

C7.5 Container Stowage and Securing Plan

If the stowage and securing plan, as referred to in MSC.1/Circ.1353/Rev.2 4.2.1 and 4.2.2, is required by the Administration, the plan is subject to approval in accordance with C7.5.1 and C7.5.2.

C7.5.1 Container Stowage Plan

The container stowage plan is to include at least the following information for each container type the ship is designed for:

- longitudinal and athwartship views of under deck and on deck stowage locations of containers including reefers as appropriate;
- alternative stowage patterns for containers of different dimensions;
- maximum stack masses[4];
- maximum stack heights with respect to approved sight lines; and
- maximum nominal container capacity.

C7.5.2 Container Securing Arrangement Plan

The container securing arrangement plan is to contain all information necessary to prepare lashing calculations in accordance with the Rules of the Society. The container securing arrangement plan is to include at least the following information:

- summary of ship particulars such as IMO No., length and breadth;
- summary of loading conditions showing relevant input parameters such as draught and GM;
- longitudinal views of under deck and on deck stowage locations of containers as appropriate showing nominal capacity;
- maximum stack masses;
- relevant properties of securing fittings, including permissible loads;
- graphical presentation of container and lashing arrangements in each bay on deck and in holds for sample loading conditions in accordance with the Rules of the Society for each container type the ship is allowed to carry;
- stack total mass and the sequence of masses in a stack;
- minimum quantity of fittings required to secure containers for the presented sample loading conditions.

C7.6 Lashing Software

If the ship is equipped with lashing software on board as per the Rules of the Society, the approval is to follow the requirements of IACS UR C6.

End of Document

[4] “Mass” and “weight” are used interchangeably in different container securing contexts.