



Technical Notice

TD **10473 / 2023**

Dated: 16.08.2023

SUBJECT:

New SOLAS requirements for towing and mooring equipment

SOLAS II-I Reg. 3-8 "Towing and mooring equipment" was amended by the Maritime Safety Committee MSC.102 in 2020 and enters into force on **1 January 2024**. As a result, two new guidelines have been created:

- **The MSC.1/Circ.1619, Guidelines** on the design of mooring arrangements and the selection of appropriate mooring equipment and fittings for safe mooring, which will affect new buildings
- **The MSC.1/Circ.1620, Guidelines** for inspection and maintenance of mooring equipment including lines, which will be a retroactive requirement and will therefore affect existing vessels.

The latter guideline, MSC.1/Circ.1620, includes procedures for **mooring operation, inspection and maintenance of mooring equipment and lines**, identifying worn-out lines and tails, and replacement of mooring lines and tails. The new requirements **will affect existing ships**, but the **biggest impact will be for vessels built before 2007**, since the approval of the associated hull support foundation of mooring fitting was not required at that time, and assignment of mooring fitting was probably not reviewed such as **Minimum Breaking load, Safety Working Load** may need to be **re-evaluated** for compliance with the requirements of MSC.1/ Circ.1620.

Ships constructed before 1 January 2024 (*Ships keel laid date on or after 1st January 2007 and before 1 January 2024*)

- Shall be provided with arrangements, equipment, and fittings of sufficient safe working load to enable the safe conduct of all towing and mooring operations associated with the normal operation of the ship.
- Arrangements, equipment, and fittings shall meet the appropriate requirements of the Administration, or an organization recognized by the Administration.
- Each fitting or item of equipment shall be clearly marked with any limitations associated with its safe operation, considering the strength of the supporting ship's structure and its attachment to it.

Ships with keel laid date before 1st January 2007

Ships with a keel lay date before 1 January 2007 were not required to comply with SOLAS, Chapter II-1/ 3-8, so may not have the original design concept to support the development of the new SOLAS maintenance and inspection requirements. For such cases, the following options are available:

- The original design concept could be a mooring arrangement plan or any document that specifies mooring specifications at the time of the ship's construction.
- Alternatively, owners may establish the original design concept, including MBLSD (Ship Design Minimum Breaking Load) for mooring based on the safe working load of mooring equipment provided on board.
- If the vessel neither has any mooring documentation nor any safe working load marking on fittings, owners are advised to check the strength of mooring equipment and their supporting hull structure based on MSC.1/Circ.1175/Rev.1. Owners should also determine MBLSD based on actual capacity of the equipment and their supporting hull structure on board. In this case, calculations should be submitted INSB for appraisal

A list of the typical issues detected:

Applicable for all ships

1. Mooring operation procedure, inspection and maintenance plan were not available on board.
2. Wrong setting of mooring winch brake holding strength.
3. Selecting higher minimum breaking load (MBL) of mooring rope for replacement.

Applicable for ships built before 2007

1. The MBL of the mooring line was not in accordance with the recommended values in the corresponding approved equipment number in IACS Rec. 10; in many cases, a higher MBL rope was used.
2. The marked safe working load (SWL) of the mooring fitting was not consistent with the MBL of the mooring ropes.
3. The hull support foundation of the mooring fitting did not have sufficient capacity to withstand the design load or marked SWL.

When will surveyors verify the requirements?

What should shipowners/managers prepare?

The following minimum requirements are to be complied with and compliance is to be **confirmed by the attending surveyor** at the initial survey for new ships or the first annual survey of Cargo or Passenger Ship Safety of Construction after 1 January 2024 for existing ships:

- **Procedures** for mooring **operations, inspection, and maintenance** of mooring equipment, including mooring lines to be **documented** and available on board.
- **Procedures** to allow the **identification and control of mooring lines, tails**, and associated attachments when on board to be **documented** and available on board.
- The **onboard maintenance plan** is to include the **periodic inspection** of mooring lines, mooring line tails and associated attachments.
- The **records of inspection and maintenance** of mooring equipment and inspection and replacement of mooring lines, are kept updated and are available on board at least to the last periodic renewal survey.
- **Manufacturers criteria** for replacement of mooring lines are available (Ref. MSC.1/Circ.1620 paragraph 4.3.1).
- **Records of the original design concept, equipment**, arrangement, and specifications are available on board.
- **Manufacturers test certificates** for mooring lines, joining shackles and synthetic tails to be kept onboard and properly traceable back to the equipment.

References

- [SOLAS II-I Reg.3-8](#), Towing and mooring equipment
- [MSC.1/Circ.1619](#), Guidelines on the design of mooring arrangements and the selection of appropriate mooring equipment and fittings for safe mooring
- [MSC.1/Circ.1620](#), Guidelines for inspection and maintenance of mooring equipment including line
- [MSC.1/Circ.1175](#), Guidance on shipboard towing and mooring equipment