
**Ships and marine technology — Ship's
mooring and towing fittings — Recessed
bitts (Casting type)**

*Navires et technologie maritime — Corps-morts et ferrures de
remorquage de navires — Bittes d'amarrage encastrées (type moulage)*

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 13799 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 4, *Outfitting and deck machinery*.

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Introduction

The recessed bitt is a type of ship's towing fitting installed on the side shell of the ship.

The recessed bitts are normally provided to easily attach the towing lines where the height of the mooring deck is too high.

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Ships and marine technology — Ship's mooring and towing fittings — Recessed bitts (Casting type)

1 Scope

This International Standard specifies the design, size and technical requirements for casting type recessed bitts to meet normal towing requirements.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IMO Circular MSC/Circ.1175, *Guidance on shipboard towing and mooring equipment*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

safe working load

SWL

maximum load in kN on the rope that should normally be applied in service conditions.

4 Classification

4.1 Type

Depending on the size and strength of the material, recessed bitts shall be classified as the following six types:

- Type 75 – nominal size 850, casting material having a yield point of not less than 235 N/mm²
- Type 110 – nominal size 850, casting material having a yield point of not less than 350 N/mm²
- Type 135 – nominal size 850, casting material having a yield point of not less than 430 N/mm²
- Type 100 – nominal size 920, casting material having a yield point of not less than 235 N/mm²
- Type 150 – nominal size 920, casting material having a yield point of not less than 350 N/mm²
- Type 180 – nominal size 920, casting material having a yield point of not less than 430 N/mm²

4.2 Nominal sizes

The nominal sizes of recessed bitts are denoted by reference to the outside diameter of the bitt, in millimetres.

The nominal size is: 850 and 920.

5 Dimensions

Recessed bitts have dimensions and particulars in accordance with Table 1 and Figure 1.

6 Materials

The materials of the following components shall be used for manufacturing the recessed bits:

- Type 75 and type 100: weldable steel casting having a yield point of not less than 235 N/mm².
- Type 110 and type 150: weldable steel casting having a yield point of not less than 350 N/mm².
- Type 135 and type 180: weldable steel casting having a yield point of not less than 430 N/mm².

7 Construction

7.1 The welding connections to the hull shall be guaranteed reliable transmission of the maximum loading of the recessed bits to hull construction without any plastic deformation or cracks.

7.2 The hull construction which the recessed bits are installed on shall be reinforced by carlings, stiffeners, etc.

7.3 The recessed bits shall be considered as a part of the hull side shell construction.

8 Manufacturing and inspection

8.1 All surfaces of the recessed bits, including welding, shall be free from any visible flaws or imperfections.

8.2 All surfaces in contact with the ropes shall be free from surface roughness or irregularities likely to cause damage to the ropes by abrasion.

8.3 The recessed bits shall be coated externally with an anti-corrosion protective finish.

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9 Marking

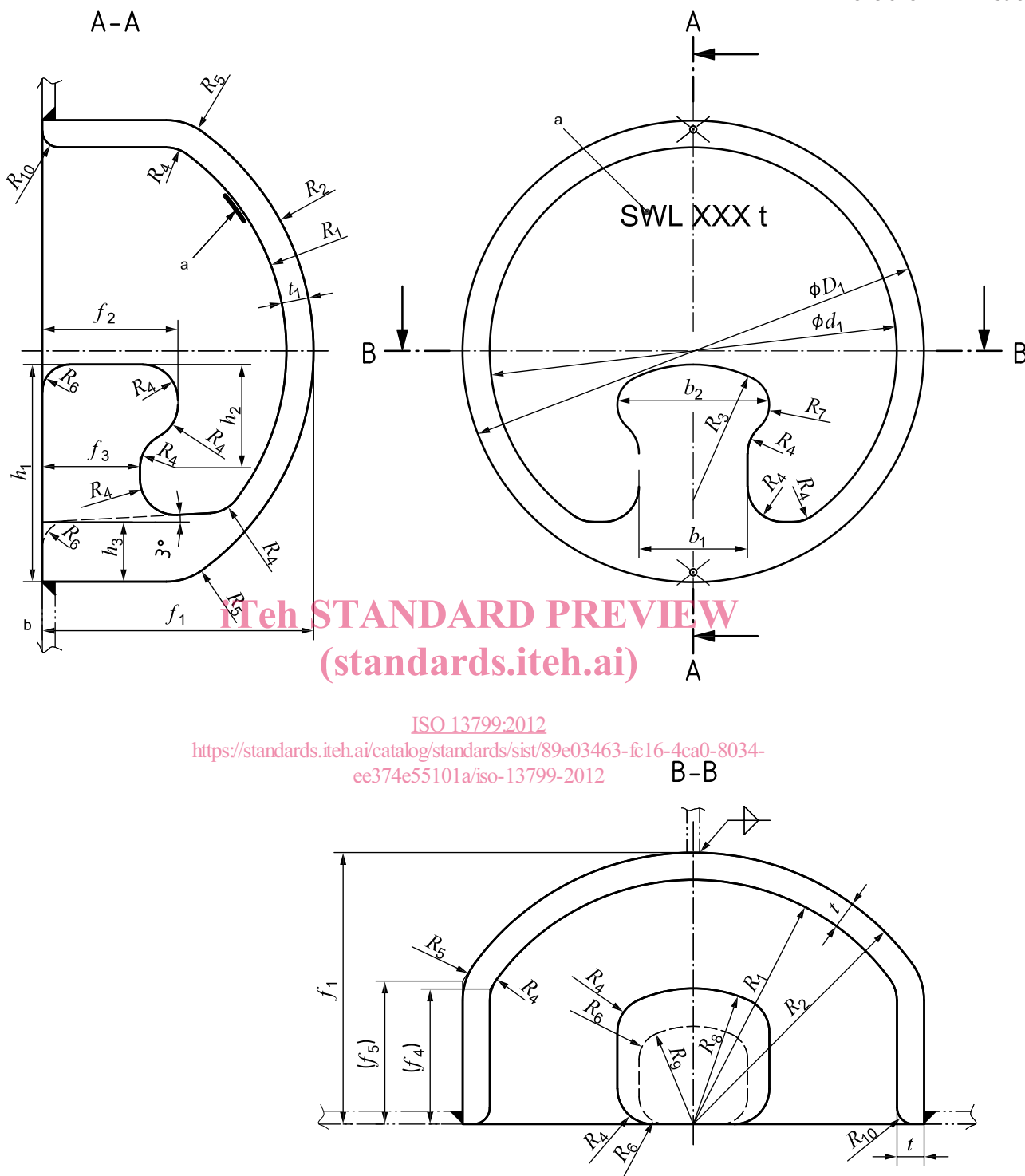
9.1 The safe working load (SWL) for the intended use for the recessed bits shall be noted in the towing and mooring plan available on board for the guidance of the shipmaster as specified in MSC/Circ.1175.

9.2 The actual SWL on board shall be determined by considering the reinforcement around the recessed bits, and it shall be marked on the towing and mooring plan. The actual SWL shall not be over the SWL indicated in this International Standard.

9.3 The recessed bits shall be clearly marked with their SWL by weld bead or equivalent. The SWL shall be expressed in tonnes (letter 't') and be placed so that it is not obscured during operation of the fitting.

EXAMPLE SWL XXX t

Dimensions in millimetres



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B-B

- a SWL marking.
- b Side shell.

NOTE 1 Bitt welding method to hull connection is to be approved by Classification Society.

NOTE 2 Centre marking by punching for easy installation.

Figure 1 — Recessed bitts