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Ships and marine technology — Ship's mooring and towing fittings — Seats for mooring chocks

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The seat for mooring chocks is a seat type of ship's mooring and towing fitting installed on the shipside to lead the mooring and towing rope from the ship's inboard to outboard.

Ships and marine technology — Ship's mooring and towing fittings — Seats for mooring chocks

1 Scope

This document specifies the types, nominal sizes, dimensions and materials, as well as construction, manufacturing and marking requirements, for the seats for mooring chocks installed to lead the mooring and towing rope of a ship.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
safe working load
SWL
safe load limit (maximum permissible load) of the fittings used for mooring and towing

4 Classification

4.1 Type

The seat for mooring chocks shall be classified by its installation site as belonging to one of the following types:

a) Type A: seat for deck-mounted mooring chock;

b) Type B. seat for deck and side shell-mounted mooring chock;

c) Type C: brackets for bulwark-mounted mooring chock.

4.2 Nominal sizes

The nominal sizes of seats for mooring chocks are denoted by reference to the same nominal sizes of mooring chocks (ISO 13713). For the seats for mooring chocks having the same size, the letter of the alphabet, i.e. A, B or C, is followed by the nominal size for the different safe working loads (SWL).

The nominal sizes are:

250 × 200, 300 × 250, 350 × 250, 400 × 250, 450 × 250, 500 × 250A, 500 × 250B

5 Dimensions

The seats for mooring chocks shall have dimensions and particulars in accordance with Tables 1, 2 and 3, and Figures 1, 2 and 3.

6 Materials

Weldable steel plates having a yield point of not less than 235 N/mm^2 shall be used for manufacturing the seats for mooring chocks.

7 Construction

The foundation of the mooring chocks shall be determined by considering the actual load direction. The foundation and welding connections to the hull shall guarantee a reliable transmission of the maximum loading of the mooring chocks to the hull construction without any plastic deformation or cracks.

8 Manufacturing and inspection

8.1 All surfaces of the seats for mooring chocks, including welded surfaces, 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 seats for mooring chocks shall be coated externally with an anti-corrosion protective finish.

9 Marking

9.1 The SWL for the intended use of the seats for mooring chocks shall be noted in the towing and mooring plan available on board for the guidance of the shipmaster, as specified in IMO circular MSC/Circ.1175.

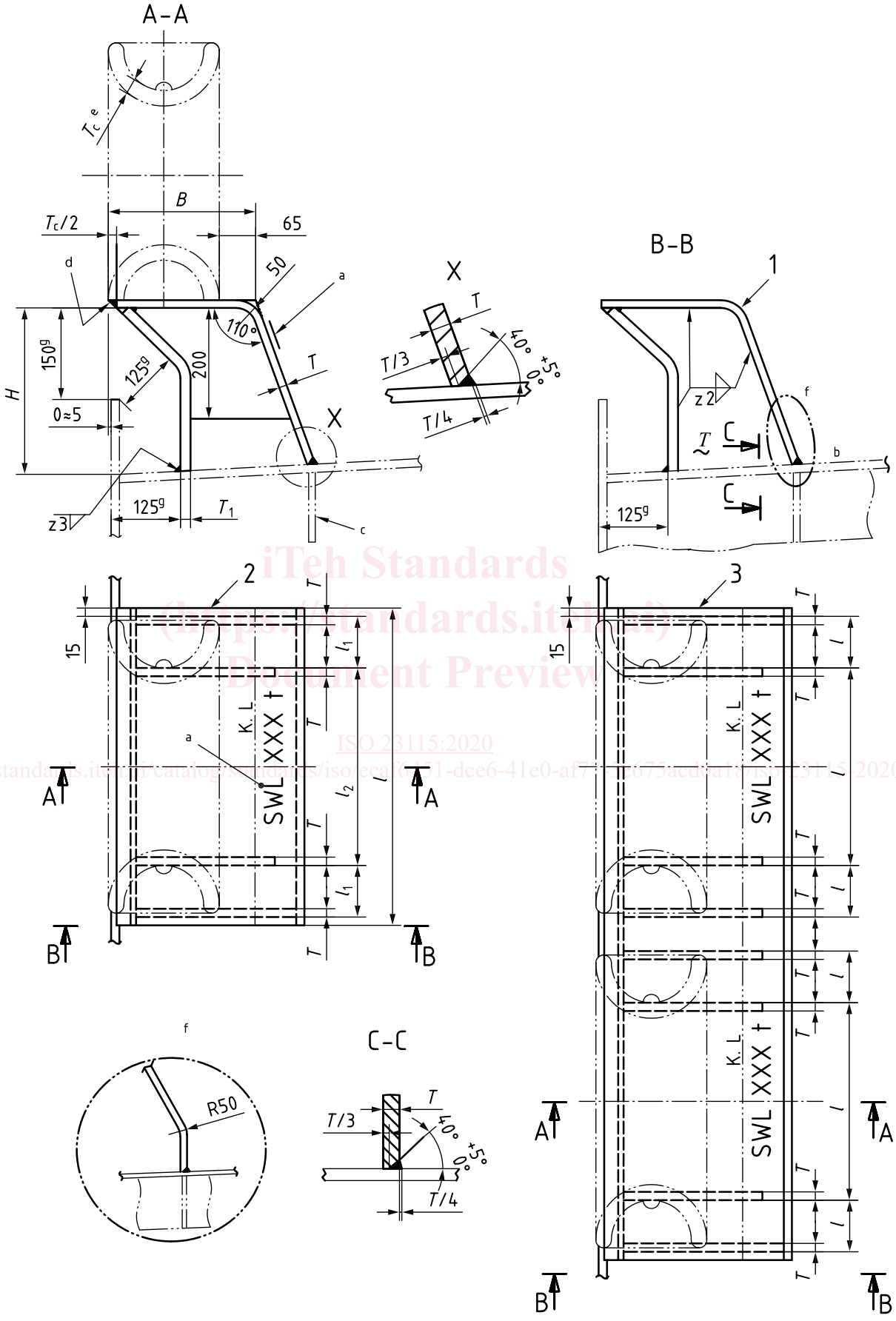
9.2 The actual SWL on board shall be determined by considering the under deck reinforcement, and it shall be marked on the towing and mooring plan. The actual SWL shall not be over the SWL indicated in this document.

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

EXAMPLE SWL XXX t

9.4 The SWL mark shall be placed on the seat of the chock or on the deck.

Dimensions in millimetres



Key

1 seat for mooring chock
2 seat for single mooring chock
3 seat for double mooring chock
a SWL marking.
b Deck.
c Under carling.
d Smooth grinding.
e Thickness of mooring chock (refer to ISO 13713).
f Alternative application method.
g Minimum height (may be adjusted depending on welding workability).

The height of seat for the mooring chock (H) shall be determined in accordance with the hull construction design.

K.L is the knuckle line.

Figure 1 — Type A — Seats for deck-mounted mooring chocks

Table 1 — Dimensions and SWL of Type A — Seats for deck-mounted mooring chocks

Dimensions in millimetres

Nominal size $L \times H$	l	l_1	l_2	B	T	T_1	Welding leg length[a]			SWL[b]		Calculated weight[c] kg
							z_1	z_2	z_3	kN	t	
250 × 200	494	87	290	225	20	16	10	14	12	353	36	90
300 × 250	588	107	344	265	22	24	11	16	17	491	50	125
350 × 250	660	118	394	285	22	24	11	16	17	589	60	143
400 × 250	734	130	444	305	22	30	11	16	21	736	75	171
450 × 250	818	141	506	325	28	34	14	20	24	981	100	231
500 × 250A	892	151	560	345	30	36	15	21	26	1 128	115	270
500 × 250B	904	153	568	345	34	40	17	24	28	1 373	140	302

[a] The welding method may be changed based on the same welding volume/strength.

[b] The SWLs shown are for reference only. These are based on the loadings as mentioned in Annex A. The strength of the seat for the closed chocks was evaluated on the basis of a seat height of 300 mm.

The "SWL" which is marked on the fitting may be adjusted depending on the actual loading conditions of mooring rope under the agreement between the user and the manufacturer.

[c] The calculated weight (mass) is for reference only, which was calculated on the basis of a seat height of 300 mm for single chock excluding the mooring chock itself.