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Ships and marine technology — Ship's mooring and towing fittings — Seats for closed 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 closed 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 closed 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 closed 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 closed chocks shall be classified by its installation site as belonging to one of the following types:

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

b) Type B: seat for deck and side shell-mounted closed chock;

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

4.2 Nominal sizes

The nominal sizes of seats for closed chocks are denoted by reference to the same nominal sizes of closed chocks (ISO 13729). For the seats for closed 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 × 214, 300 × 250 × 286, 350 × 250 × 333, 400 × 250 × 381, 450 × 250 × 381, 500 × 250 × 381, 400 × 250 × 428, 450 × 250 × 428, 500 × 250 × 428, 500 × 400 × 428, 500 × 250 × 525A, 500 × 400 × 525A, 500 × 250 × 525B, 500 × 400 × 525B

5 Dimensions

The seats for closed 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 closed chocks.

7 Construction

The foundation of the closed 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 closed chocks to the hull construction without any plastic deformation or cracks.

8 Manufacturing and inspection

8.1 All surfaces of the seats for closed 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 closed 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 closed 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.

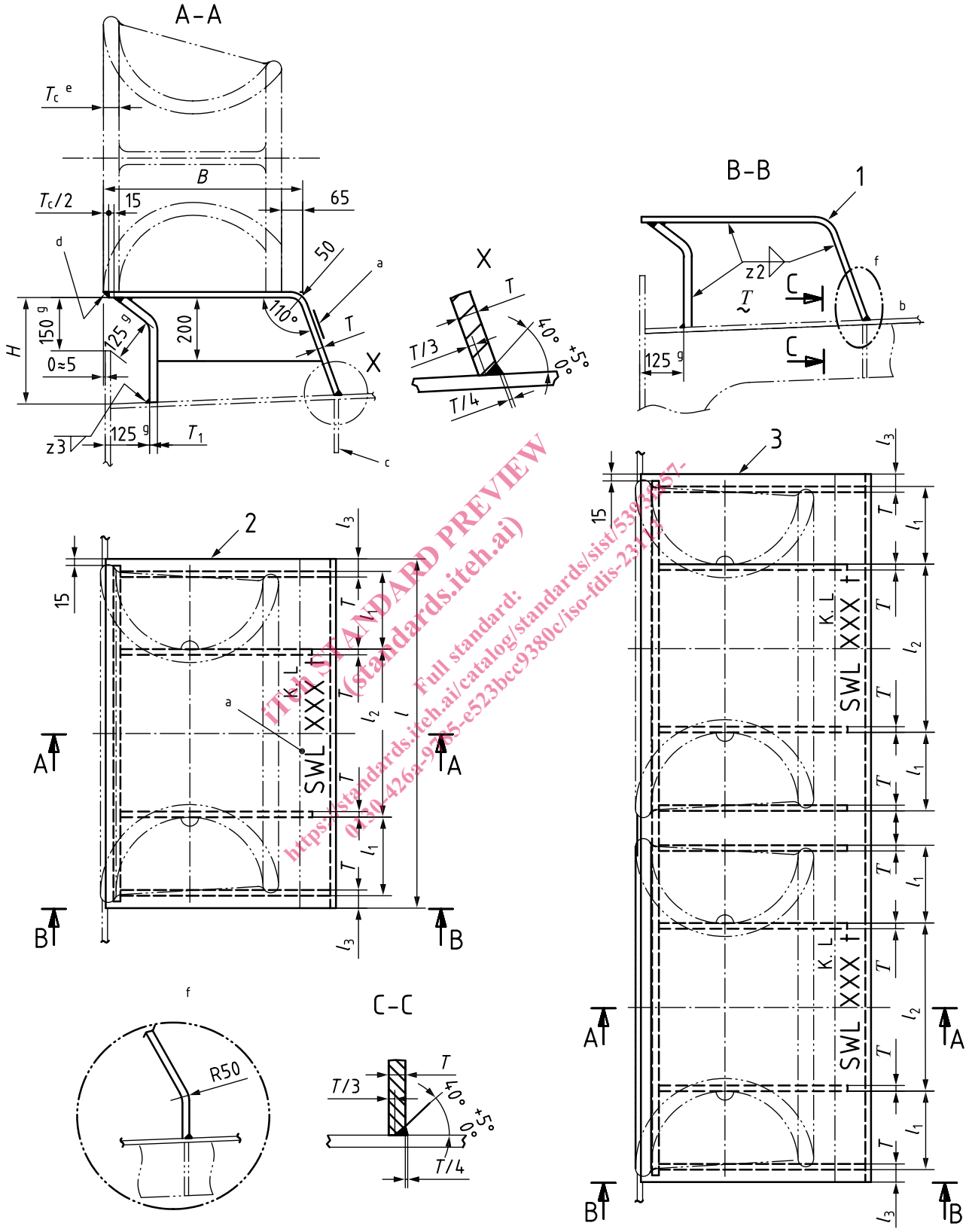
9.2 The actual SWL on board shall be determined by considering the under deck reinforcement, and it shall be marked on the towing and mooring plan. The actual SWL shall not be over the SWL indicated in this document.

9.3 The seats for closed 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 closed chock

2 seat for single closed chock

3 seat for double closed chock

[a] SWL marking.

[b] Deck.

[c] Under carling.

[d] Smooth grinding.

[e] Thickness of closed chock (refer to ISO 13729).

[f] Alternative application method.

[g] Minimum distance (may be adjusted depending on welding workability).

The height of seat for the closed 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 closed chocks

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

Dimensions in millimetres

Nominal size $L \times H \times D$	I	I_1	I_2	I_3	B	T	T_1	Welding leg length[a]			SWL[c]		Calculated weight[d] kg
								z_1[b]	z_2	z_3	kN	t	
250 × 200 × 214	518	89	287	26,5	279	12	12	6	9	9	226	23	76
300 × 250 × 286	644	112,5	356	31,5	351	16	16	8	12	12	422	43	136
350 × 250 × 333	746	121,5	433	35	398	16	22	8	12	16	549	56	179
400 × 250 × 381	850	130,5	511	39	446	18	24	9	13	17	687	70	234
450 × 250 × 381	900	131	560	39	446	18	24	9	13	17	706	72	244
500 × 250 × 381	950	131	610	39	446	18	24	9	13	17	765	78	255
400 × 250 × 428	900	139	538	42	493	20	30	10	14	21	883	90	297
450 × 250 × 428	950	139	588	42	493	20	30	10	14	21	912	93	310
500 × 250 × 428	1 000	139	638	42	493	20	30	10	14	21	932	95	322
500 × 400 × 428	1 000	139	638	42	493	20	30	10	14	21	893	91	322
500 × 250 × 525A	1 098	165	692	38	590	22	30	11	16	21	1 148	117	409
500 × 400 × 525A	1 098	165	692	38	590	22	32	11	16	23	1 158	118	416
500 × 250 × 525B	1 104	163	698	40	590	24	36	12	17	26	1 413	144	460
500 × 400 × 525B	1 104	163	698	40	590	24	38	12	17	27	1 383	141	468

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

[b] Welding leg lengths other than specified in Figure 1 shall be applied to z_1.

[c] 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 400 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.

[d] The calculated weight (mass) is for reference only, which was calculated on the basis of a seat height of 400 mm for single chock, excluding the closed chock itself.