International Standard ISO 4565

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Small craft — Anchor chains

Navires de plaisance — Chaînes d'ancre

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 4565 was prepared by Technical Committee ISO/TC 188, *Small craft*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Small craft — Anchor chains

1 Scope

This International Standard specifies the dimensions, characteristics and tolerances as well as galvanizing of anchor chains intended for use with small craft windlasses.

2 Field of application

This International Standard applies to anchor chains of nominal diameters between 6 and 12 mm, intended for anchoring small craft and which can be controlled using windlasses.

It does not apply to chains for lifting purposes.

3 References

ISO 1461, *Metallic coatings — Hot dip galvanized coatings on fabricated ferrous products — Requirements.*

ISO 1834, *Short link chain for lifting purposes — General conditions of acceptance.*

4 Characteristics

4.1 Size

In accordance with ISO 1834, the size shall be the nominal diameter, d_n, of the steel wire or bar from which the chain is made (see the figure).

NOTE — For further definitions, other than chain dimensions, see ISO 1834.

All chain dimensions are based on the nominal diameter d_n :

- chain pitch : $p_1 = 3\,d_n$
- inside width : w_1 min. $= 1{,}35\,d_n$
- outside width : w max. $= 3{,}6\,d_n$

Their values are specified in table 1.

4.2 Mechanical properties

The values of the proof force, F_e, and the minimum breaking force, F_m, in table 1 correspond approximately to the mechanical properties shown in table 2.

Table 2 — Mechanical properties

Mean stress at specified minimum breaking force, F_m	315 MPa (N/mm^2)
Mean stress at proof force, F_e	160 MPa (N/mm^2)
Total ultimate elongation	20 %

4.3 Galvanizing

Galvanizing shall be carried out using a hot process according to ISO 1461.

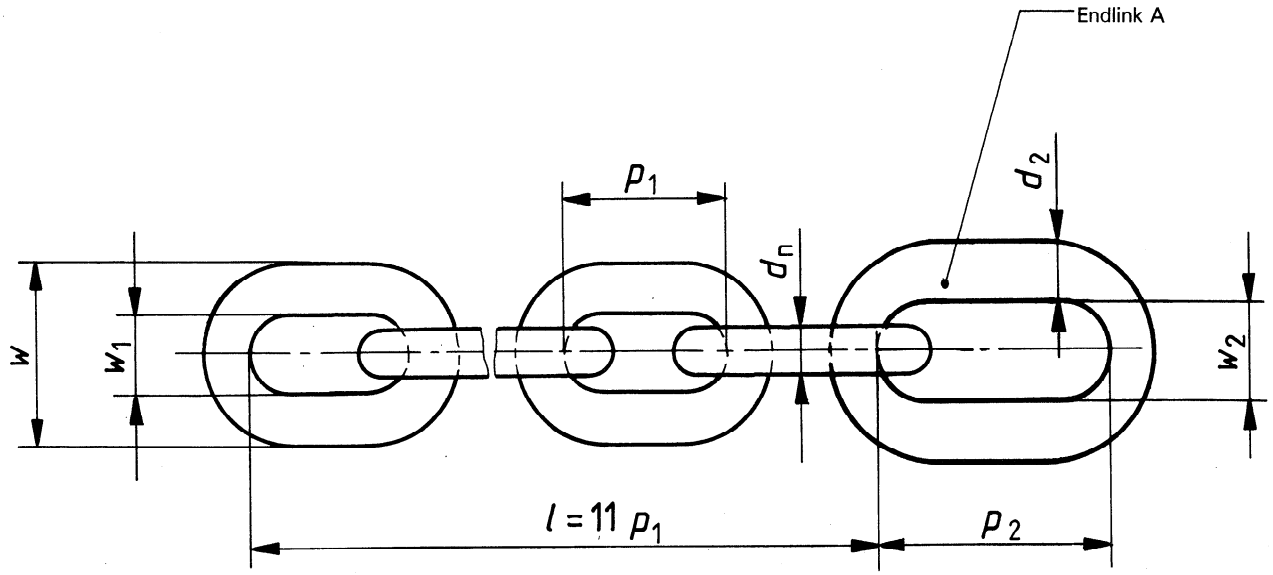
The mean coating mass (corresponding to a material thickness greater than 5 mm) shall be not less than 500 g/m^2.

Table 1 — Values of dimensions, proof force and minimum breaking force

Dimensions in millimetres

d_n	± 5 %	p_1	± 3 % ≈	w_1 min.	w max.	l	± 2 % ≈	F_e kN min.	F_m kN min.	Endlink A				
										d_2	± 5 %	p_2	± 3 %	w_2 min.
6	0,3	18	0,5	8,1	21,6	198	4	9	18	8	0,4*	40	1,2	18
8	0,4	24	0,7	10,8	28,8	264	5	16	32	10	0,5	44	1,3	20
10	0,5	30	0,9	13,5	36	330	7	25	50	12	0,6	54	1,6	25
12	0,6	36	1,1	16,2	43,2	396	8	35,5	71	14	0,7	54	1,6	25

* The tolerance on d_2 for chain size $d_n = 6$ shall be such that satisfactory articulation is achieved with the chain.



Figure

5 Tolerances

The following tolerances shall be applied and maintained after galvanizing :

- on the nominal diameter : ± 5 %
- on the pitch : ± 3 %
- on the measuring length l over 11 links : ± 2 %

6 Tests and acceptance

Tests and acceptance conditions shall be as specified in ISO 1834.

The length of the lot from which the test samples are selected shall be 500 mm.

7 Preferred length

Anchor chains shall be delivered in preferred lengths according to table 3.

Table 3 — Preferred lengths of anchor chains

Chain size	Preferred lengths, m				
d_n	5	10	30	50	80
6	x		x	x	
8	x		x	x	
10		x		x	
12		x		x	x

Other lengths specified by national authorities or classification societies shall also be considered preferred lengths.

8 Marking

8.1 Quality marking

The quality mark for anchor chains according to this International Standard is L or 3.

It shall be applied as specified in ISO 1834.

8.2 Identification marking

The identification mark shall be as specified in ISO 1834.

9 Test certificate

The manufacturer shall, if required, supply a certificate of test and examination with every supply of chain, containing the information detailed in ISO 1834.

A typical form is given in ISO 1834.

10 Designation

Anchor chains according to this International Standard shall be designated as follows :

a) abbreviated name : chain;

b) number of this International Standard : ISO 4565;

c) quality mark L (or number 3);

d) nominal diameter;

e) nominal pitch.

Example for the designation of an anchor chain of nominal diameter 10 mm, and nominal pitch 30 mm :

Chain ISO 4565 - L - 10 × 30

11 Ordering

When ordering, the preferred length of the chain shall also be given in the designation, in accordance with clause 7.

Example for the designation of 50 m length of chain, of 10 mm diameter and a pitch of 30 mm :

50 m chain ISO 4565 - L - 10 × 30

If this chain should be equipped with two endlinks A, the designation of the whole chain shall read :

50 m chain ISO 4565 - L - 10 × 30 - 2A

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