



SLOVENSKI STANDARD
SIST EN 14874:2006
01-september-2006

Plovila za celinske vode – Gladka veriga za sidro – Sidrni vitel

Inland navigation vessels - Studless anchor chain - Cable lifter

Fahrzeuge der Binnenschifffahrt - Steglose Ankerkette - Kettenscheibe

Bateaux de navigation intérieure - Chaîne d'ancre sans pignon - Pignon à chaîne

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Ta slovenski standard je istoveten z: EN 14874:2005

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ICS:

47.020.50

47.060

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en

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ICS 47.020.50; 47.060

English Version

Inland navigation vessels - Studless anchor chain - Cable lifter

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pignon - Pignon à chaîne

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This European Standard was approved by CEN on 19 October 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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Foreword

This European Standard (EN 14874:2005) has been prepared by Technical Committee CEN/TC 15 "Inland navigation vessels", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2006, and conflicting national standards shall be withdrawn at the latest by May 2006.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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Introduction

This European Standard has been prepared as round steel link studless anchor chains as specified in EN 14330 with a pitch of $2,8 d$ have proved successful with the accessories specified in EN 14606 in inland navigation.

The cable lifter is designed for round steel link chains as specified in EN 14330, but not for the passage of accessories, in particular, Kenter-type joining shackles as specified in EN 14606.

Cable lifters for stud-link anchor chains are standardized in ISO 21.

1 Scope

This standard applies to cable lifters for round steel link chains according to EN 14330 for inland navigation vessels.

It specifies requirements, dimensions, materials, the designation and testing.

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.

EN 1561:1997, *Founding — Grey cast irons* (standards.iteh.ai)

EN 13711, *Inland navigation vessels — Winches for ship operation — Safety requirements*

EN 14330, *Inland navigation vessels — Studless anchor chain — Round steel link chain*

EN 14606:2004, *Inland navigation vessels — Studless anchor chain — Accessories*

ISO 2768-1, *General tolerances – Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1:1989)*

ISO 8062, *Castings — System of dimensional tolerances and machining allowances*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 14606 and the following apply.

- 3.1**
cable lifter
pocket wheel
chain sprocket
sprocket wheel
wheel with teeth and chain pockets on the circumference for form-fit or interference-fit transportation of a round steel link chain, on which the horizontal chain link runs into the chain pocket

3.2**nominal size** $d \times p$

<round steel link chain> nominal dimension of the diameter d and nominal dimension of the pitch p of the round steel link chain according to EN 14330

3.3**number of teeth**

number of cogs

 z

number of teeth of a cable lifter

3.4**chain pocket**

recess on the circumference of the cable lifter for accommodating the chain links lying horizontally

3.4.1**supporting diameter** d_4

diameter measured at the base of the chain pocket

3.4.2**groove width** b

recess radial to the cable lifter for accommodating the vertical chain links

3.4.3**cable lifter width** c

external width of the cable lifter

3.4.4**pocket length** w

length of the chain pocket

3.4.5**pocket radii**horizontal radius (r_1) and vertical radius (r_2) of the chain pocket**3.5****groove base diameter** d_3

diameter measured at the groove base of the cable lifter

3.6**reference diameter** D_0

theoretical diameter of the cable lifter

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4 Requirements, dimensions

4.1 General

The cable lifter shall be designed so that the round steel link chain does not spring out nor slide, or if it does, only slightly, between the teeth.

Safe lifting or lowering of the anchor requires an angle of contact α of 110 ° at least and more than two teeth engaged according to EN 13711.

NOTE 1 The theoretical reference diameter D_0 is important in the design of the windlass drive or capstan drive.

NOTE 2 In order to ensure the safe passage of the round steel chain link from the cable lifter into the chain locker, a suitable device, e.g. chain projector or raised hawse pipe may be provided.

4.2 Material

Grey cast iron, symbol EN-GJL 200 – according to EN 1561.

4.3 Number of teeth

The cable lifter shall have at least five teeth.

4.4 Dimensions

The cable lifters and the teeth profiles need not correspond to the design illustrated, compliance is only required with the dimensions given.

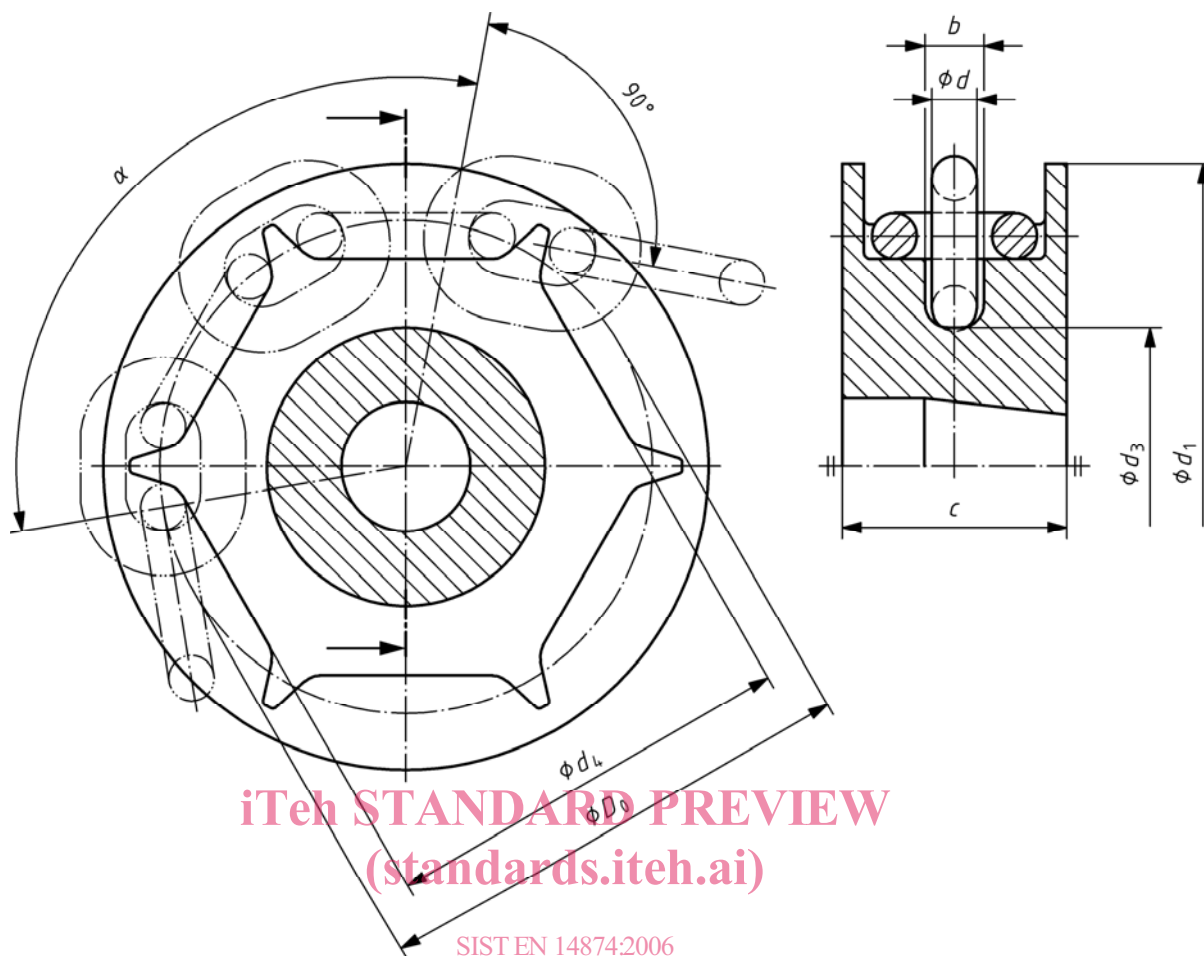
For calculation principles for determining the dimensions, see Annex A.

For general tolerances for cast iron, ISO 8062-CT 12 shall apply.

For general tolerances for mechanical finishing, class m of ISO 2768-1 shall apply.

For dimensions, see Table 1.

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Figure 1 — Cable lifter with 6 teeth for studless anchor chain

The length of the chain pocket w is measured parallel to the chain pocket base at a distance of r_2 . The arc of the circle with r_1 describes the ends of the chain pocket, see Figure 2.