

Inland navigation vessels — Studless anchor chain — Round steel link chain

The European Standard EN 14330:2003 has the status of a
British Standard

ICS 47.060

National foreword

This British Standard is the official English language version of EN 14330:2003.

The UK participation in its preparation was entrusted by Technical Committee SME/32, Ships and marine technology, to Subcommittee SME/32/7, Ships and marine technology — Inland navigation vessels, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 16 January 2004

Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 16, an inside back cover and a back cover.

The BSI copyright notice displayed in this document indicates when the document was last issued.

Amendments issued since publication

Amd. No.	Date	Comments

© BSI 16 January 2004

ISBN 0 580 43240 8

English version

Inland navigation vessels - Studless anchor chain - Round steel link chain

Bateaux de navigation intérieure - Chaîne d'ancre sans pignon - Chaîne en acier ronde,

Fahrzeuge der Binnenschifffahrt - Steglose Ankerkette - Rundstahlkette

This European Standard was approved by CEN on 1 September 2003.

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 Management Centre 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Requirements	5
4.1 Dimensions	5
4.1.1 Diameter d	5
4.1.2 Tolerance on diameter	6
4.1.3 Weld diameter d_s	6
4.1.4 Weld section e	6
4.1.5 Pitch and gauge length	6
4.1.6 Widths	6
4.2.1 General	7
4.2.2 Steel grade	7
4.2.3 Deoxidation	7
4.2.4 Chemical composition	8
4.3 Heat treatment	8
4.4 Mechanical properties	8
4.4.1 Manufacturing proof force	8
4.4.2 Breaking force	8
4.4.3 Total ultimate elongation	8
4.4.4 Deflection	8
5 Testing	9
5.1 Manufacturing test	9
5.2 Size of lot and selection of samples	9
5.3 Verification of gauge length l	9
5.4 Breaking force and total ultimate elongation	9
5.4.1 Static tensile test	9
5.4.2 Breaking force and total ultimate elongation	9
5.5 Deflection	10
5.5.1 Bend test	10
6 Designation	10
7 Marking	11
Annex A (informative) Calculation of dimensions, tensile force and mechanical properties	12
A.1 Dimensions and tolerances	12
A.2 Tensile force and mechanical properties	13
A.2.1 General	13
A.2.2 Calculation values for tensile force WF	13
A.2.3 Calculation values for manufacturing proof force MPF	13
A.2.4 Calculation values for breaking force BF	13
A.2.5 Calculation values for deflection f	14
Annex B (informative) Relationship with other strength grades	15
Bibliography	16

Foreword

This document EN 14330:2003 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 2004, and conflicting national standards shall be withdrawn at the latest by May 2004.

The standard specifies requirements for round steel link chains for studless anchor chains within the meaning of the Council Directive 82/714 EEC of 4 October 1982 laying down technical requirements for inland navigation vessels.

In inland navigation, round steel link chains with a pitch of $2,8 d$ have proven successful for studless anchor chains over several years.

Stud-link anchor chains, used particularly for sea-going vessels, are standardized in ISO 1704.

Accessories for the complete studless anchor chain, such as joining links, swivel shackles and swivels are covered in prEN 14606.

Annexes A and B are informative.

This document contains a bibliography.

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

1 Scope

This standard applies to round steel link chains with a pitch of $2,8 d$ of strength grade 2 from which studless anchor chains for inland navigation vessels are made with the relevant accessories, e.g. joining links, swivel shackles and swivels.

This standard specifies dimensions, mechanical properties, data for designation, marking and test conditions.

NOTE For relationship with other strength grades, see annex B.

2 Normative references

This standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 818-1, *Short-link chain for lifting — Safety — Part 1: General conditions of acceptance.*

EN 10025, *Hot-rolled products of non-alloy structural steels — Technical delivery conditions.*

ISO 643, *Steels — Micrographic determination of the apparent grain size.*

3 Terms and definitions

For the purposes of this European Standard, the following definitions apply.

3.1

anchor chain

chain strand between anchor and chain locker

3.2

studless anchor chain

anchor chain consisting of round steel link chain, joining links, swivel shackles and swivels

3.3

round steel link chain

studless chain (metre ware), consisting of chain links having no reinforcing stud

3.4

nominal size

$d \times p$

diameter and pitch of the round steel link chain

3.5

diameter

d

material diameter of the chain link leg opposite the weld