

Bright steel products — Technical delivery conditions —

Part 1: General

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British Standard

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 10, an inside back cover and a back cover.

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Foreword

This European Standard has been prepared by Technical Committee ECISS/TC 23, Steels for heat treatment, alloy steels and free-cutting steels — Qualities and dimensions, 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of an identical text or by endorsement, at the latest by January 2000, and conflicting national standards shall be withdrawn at the latest by January 2000.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association. This European Standard is considered to be a supporting standard to those applications and product standards which in themselves support an essential safety requirement of a New Approach Directive and which make reference to this European Standard.

This European Standard EN 10277, Bright steel products — Technical delivery conditions, is subdivided as follows.

- *Part 1: General;*
- *Part 2: Steels for general engineering purposes;*
- *Part 3: Free-cutting steels;*
- *Part 4: Case-hardening steels;*
- *Part 5: Steels for quenching and tempering.*

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, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom

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1 Scope

1.1 This part of EN 10277 specifies the general technical delivery conditions for bright steel bars in the drawn, turned or ground condition, in straight lengths and of the following steel types:

- a) general engineering steels as specified in EN 10277-2;
- b) free-cutting steels as specified in EN 10277-3;
- c) case-hardening steels as specified in EN 10277-4;
- d) steels for quenching and tempering as specified in EN 10277-5.

It does not cover cold rolled products and cut lengths produced from strip or sheet by cutting.

1.2 In special cases variations in these technical delivery requirements or additions to them may form the subject of an agreement at the time of enquiry and order (see annex B).

1.3 In addition to the specifications of this European Standard, the general technical delivery requirements of EN 10021 are applicable, unless otherwise specified.

2 Normative references

This European 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 European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

ENV 606, *Bar coded transport and handling labels for steel products*.

EN 10002-1, *Metallic materials — Tensile testing — Part 1: Method of testing (at ambient temperature), "including Addendum AC1:1990"*.

EN 10003-1, *Metallic materials — Brinell hardness test — Part 1: Test method*.

EN 10020, *Definition and classification of grades of steel*.

EN 10021, *General technical delivery requirements for steel and iron products*.

EN 10027-1, *Designation systems for steels — Part 1: Steel names, principal symbols*.

EN 10027-2, *Designation systems for steel — Part 2: Numerical system*.

EN 10052, *Vocabulary of heat treatment terms for ferrous products*.

EN 10079, *Definition of steel products*.

EN 10204, *Metallic products — Types of inspection documents (includes amendment A1:1995)*.

EN 10277-2, *Bright steel products — Technical delivery conditions — Part 2: Steels for general engineering purposes*.

EN 10277-3, *Bright steel products — Technical delivery conditions — Part 3: Free-cutting steels*.

EN 10277-4, *Bright steel products — Technical delivery conditions — Part 4: Case-hardening steels*.

EN 10277-5, *Bright steel products — Technical delivery conditions — Part 5: Steels for quenching and tempering*.

EN 10278, *Dimensions and tolerances of bright steel products*.

EN ISO 377, *Steel and steel products — Location and preparation of samples and test pieces for mechanical testing*.

EURONORM 103¹⁾, *Microscopic determination of the ferritic or austenitic grain size of steels*.

EURONORM 104¹⁾, *Determination of the depth of decarburization of non-alloy and low alloy structural steels*.

CR 10260, *ECISS/IC 10 — Designation systems for steel — Additional symbols*.

CR 10261, *ECISS/IC 11 — Iron and steel — Review of available methods of chemical analysis*.

ISO 286-1, *ISO system of limits and fits — Part 1: Bases of tolerances, deviations and fits*.

ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition*.

3 Definitions

For the purpose of this European Standard the following definitions apply in addition to the definitions in EN ISO 377, ISO 14284 and EN 10021.

3.1 Non-alloy and alloy steel: base, quality and special steel

See the definitions in EN 10020.

3.2 Steel products

Steel products are defined according to their shape and dimensions in EN 10079. In particular the following definitions are reproduced.

3.2.1

drawn products (6.5.1, EN 10079:1992)

products of various cross-section shapes obtained, after descaling, by drawing of hot rolled bars or rod on a draw bench (cold deformation without removing material). This operation gives the product special features with respect to shape, dimensional accuracy (ISO 286 class IT11 or better) and surface finish. In addition, the process causes cold working of the product, which can be eliminated by subsequent heat treatment. Products in lengths are delivered straightened regardless of size

¹⁾ It may be agreed at the time of ordering, until this EURONORM has been adopted as a European Standard, that either this EURONORM or a corresponding national standard should be applied.