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Cold reduced tinmill products - Electrolytic tinplate and electrolytic chromium/chromium oxide coated steel

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ICS 77.140.50

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EUROPEAN STANDARD

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Cold reduced tinmill products - Electrolytic tinplate and electrolytic chromium/chromium oxide coated steel

Aciers pour emballage laminés à froid - Fer blanc électrolytique et acier revêtu de chrome/d'oxyde de chrome électrolytique

Kaltgewalzte Verpackungsblecherzeugnisse - Elektrolytisch verzinnter und spezialverchromter Stahl

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European foreword

This document (EN 10202:2022) has been prepared by Technical Committee CEN/TC 459 "ECISS - European Committee for Iron and Steel Standardization"[1], the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by August 2022, and conflicting national standards shall be withdrawn at the latest by August 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 10202:2001.

In comparison with the previous edition, the following technical modifications have been made:

— normative references have been updated;

— revision of the definition of electrolytic chromium coated steel with the addition of the symbol ECCS-RC which allows the use of a trivalent process;

— rewording of Clause 5 with the split into mandatory information (5.1) and options (5.2);

— modification of Clause 6 with the rewording of 6.1 and the addition of 6.2 and 6.3 about annealing and finish respectively;

— Table 1 has been updated;

— major modifications of 6.4 about passivation;

— addition of a new subclause 6.6 on imperfections that includes 6.6.1 and 6.6.2 for coils and sheets respectively;

— major modifications of Clause 7 about coatings including changes of Table 2, Table 3 and Table 4;

— major modifications of Clause 8 about mechanical properties with the addition of stress-strain curves for batch and continuous annealed material, curve showing the plateau height for continuous annealed material and stress-strain curves for the determination of the yield strength of some continuous annealed grades;

— removal of the tensile strength values from Table 5 and transfer into informative Annex J;

— modification of 9.4.6 about test method for centre fullness;

— modifications of the ordering of Annexes;

— new Annex I about tensile testing conditions in case of dispute;

— deletion of the Annex giving the previous designations and of the Annex giving examples of steel types and chemical composition.

[1] Through its sub-committee SC 9 "Coated and uncoated flat products to be used for cold forming" (secretariat: AFNOR).

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Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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1 Scope

This document specifies requirements for tinmill products in the form of sheets or coils. Tinmill products consist of single and double reduced low carbon mild steel electrolytically coated with either tin (tinplate) or chromium/chromium oxide (ECCS) or (ECCS-RC) (see 3.3).

Single reduced tinmill products are specified in nominal thicknesses that are multiples of 0,005 mm from 0,16 mm up to and including 0,49 mm. Double reduced tinmill products are specified in nominal thicknesses that are multiples of 0,005 mm from 0,12 mm up to and including 0,29 mm.

NOTE 1 Other thicknesses can be ordered upon agreement.

This document applies to coils and sheets cut from coils in nominal minimum widths of 600 mm.

NOTE 2 Standard width coils for specific uses, e.g. tabstock, can be slit into narrow strip for supply in coil form.

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.

EN 610, *Tin and tin alloys - Ingot tin*

EN 10204, *Metallic products - Types of inspection documents*

EN 10334:2005, *Steel for packaging - Flat steel products intended for use in contact with foodstuffs, products and beverages for human and animal consumption - Non-coated steel (blackplate)*

EN ISO 6892-1:2019, *Metallic materials - Tensile testing - Part 1: Method of test at room temperature (ISO 6892-1:2019)*

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:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
electrolytic tinplate
cold reduced low carbon mild steel sheet or coil coated on both surfaces with tin that is applied in continuous electrolytic operation

3.2
differentially coated electrolytic tinplate
electrolytic tinplate, one surface of which carries a heavier tin coating than the other

Note 1 to entry: In some cases, one surface does not have any tin coating.

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