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Steel sheet, cold-reduced, of higher yield strength with improved formability

Tôles laminées à froid en acier à limite d'élasticité et aptitude au formage accrues

Reference number
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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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 12, *Continuous mill flat rolled products*.

This fourth edition cancels and replaces the third edition (ISO 13887:2011), which has been technically revised.

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Introduction

With the combination of higher strength and improved formability derived from the tests outlined in this document, it is possible to obtain savings in mass along with better weldability.

References [4] and [5] may be reviewed for comparison with this document. The relationship between the standards might only be approximate; therefore, the respective standards should be consulted for actual requirements. Those who use these documents will need to determine which specifications address their needs.

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Steel sheet, cold-reduced, of higher yield strength with improved formability

1 Scope

This document is applicable to all grades of cold-reduced steel sheet of higher yield strength with improved formability. The steel is made according to fine-grain practice and has a suitable chemical composition to provide improved formability. The product is intended for the fabrication of parts requiring better formability. It is generally used in the delivered condition.

This document does not apply to steels designated as commercial quality or drawing quality (see ISO 3574), steels of structural quality (see ISO 4997) or steels of high tensile strength and low yield point with improved formability (see ISO 14590).

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.

ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 16162, *Cold-rolled steel sheet products — Dimensional and shape tolerances*

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 http://www.electropedia.org/

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

3.1
cold-reduced steel sheet
product obtained from hot-rolled descaled steel sheet by cold-reducing to the required sheet thickness followed by annealing to recrystallize the grain structure

3.2
lot
up to a specified quantity of steel sheet of the same designation rolled to the same thickness

4 Dimensions

Cold-reduced steel sheet of higher yield strength with improved formability is produced in thicknesses from 0,25 mm to 3,2 mm and in widths of 600 mm and over in coils and cut lengths. Product less than 600 mm wide, slit from wide sheet, will be considered as sheet not strip.

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