

ICS 77.140.50

CCS H46



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 41763-2022

**Dimensions, shape, weight and tolerances for twin-roll cast thin
strip**

双辊铸轧热轧薄钢板及钢带的尺寸、外形、重量及允许偏差

Issued on: October 14, 2022

Implemented on: May 1, 2023

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Classification and code
- 5 Dimensions...
- 5.2 Recommended nominal dimensions
- 6 Dimensions and allowable deviation...
- 7 Shape...
- 8 Measurement of dimension and shape
- 8.1 Thickness
- 8.3 Unevenness
- 9 Weight...
- 10 Rounding off for numerical values...

Foreword

This document was drafted in accordance with the rules given in GB/T 1.1-2020, Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents. Please note that some of the contents of this document may involve patents. The issuing organization of this document is not responsible for identifying patents. This document was proposed by China Iron and Steel Industry Association. This document shall be under the jurisdiction of National Technical Committee 183 on Iron and Steel of Standardization Administration of China (SAC/TC 183). Drafting organizations of this document: Zhangjiagang Sino-US Ultra-thin Tape Technology Co., Ltd., China Metallurgical Information and Standardization Institute, Jingye Iron and Steel Co., Ltd., Jiangsu Shagang Group Co., Ltd., Institute of Research of Iron & Steel, Jiangsu Provision Sha-steel Co., Ltd. Chief drafting staffs of this document: Shi Yixin, Feng Qingxiao, Li Xiaobo, Zhang Weixu, Dou Weixue, Nie Wenjin, Tian Zijian, Yu Hui, Li Hualong, Shi Zhipeng, Meng Jing, Zhou Dongsheng, Huang Jiugui, Liu Zhiqiao. Dimension, shape, weight and tolerance for twin-roll casting thin gauge hot-rolled steel strip and sheet

1 Scope

China's national standard for the dimensions, shape, weight and tolerances of twin-roll cast thin strip. Twin-roll casting pours molten metal directly between two water-cooled rolls

turning in opposite directions, and what emerges is solid strip a few millimetres thick. It collapses the conventional route - cast a slab, reheat it, roll it through a hot mill of several stands - into one operation, and the energy and capital saved are substantial. The reason it is not universal is that the metal solidifies in fractions of a second under conditions nothing else reproduces, which gives a structure and a surface unlike conventionally rolled strip and constrains which alloys can be cast this way. Aluminium and some steels and magnesium alloys are produced commercially. A dimensional standard is needed because the strip's tolerances, its edge condition and its shape differ systematically from rolled product, and a customer's process has to be told which it is receiving.

This document specifies the classification and code, dimension, dimension tolerance, shape, measurement of dimension and shape, weight and rounding off for numerical values for twin-roll casting thin gauge hot-rolled steel strip and sheet (hereinafter referred to as "steel strip and sheet"). This document applies to hot-rolled thin steel strips, slitting steel strips, as well as steel strip cross-cut steel plates - with a thickness of

0.6 mm ~

2.0 mm and a width of 900 mm ~ 1800 mm - which are produced by twin-roll casting and rolling process.

2 Normative references

The following documents are normatively referenced in this document and are indispensable for its application. For dated references, only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable to this document.

GB/T 8170, Rules of rounding off for numerical values & expression and judgment of limiting values

3 Terms and definitions

The following terms and definitions are applicable to this document.

3.1 Twin-roll cast steel strip and sheet Steel strip and sheet which is made by using the twin-roll casting and rolling process, to directly cast the molten steel into a cast strip of a thickness close to the final thickness, and subsequently hot-rolled with a small reduction.

4 Classification and code

4.1 The classification and code, by edge state, are as follows:

- a) cut edge, EC;
- b) mill edge, EM.

4.2 The classification and code, by dimension precision, are as follows:

- a) ordinary thickness precision, PT. A;
- b) higher thickness precision, PT. B;
- c) ordinary width precision, PW. A;
- d) higher width precision, PW. B;
- e) ordinary length precision, PL. A;
- f) higher length precision, PL. B.

4.3 By surface treatment method, it is divided into:

- a) hot rolled state;
- b) pickling state.

5.2 Recommended nominal dimensions

5.2.1 The nominal thickness of the steel strip and sheet shall be any size in multiples of 0.05 mm, and within the range specified in 5.1.

5.2.2 The nominal width of the hot-rolled thin steel plate and hot-rolled thin steel strip shall be within the range specified in 5.1, and any dimension in multiples of 5 mm. The nominal width of the slitting steel strip shall be within the range specified in 5.1, and any dimension in multiples of 1 mm.

5.2.3 The nominal length of the hot-rolled steel plate shall be within the range specified in 5.1, and any dimension in multiples of 50 mm.

8.1 Thickness

8.1.1 The mill-edged steel strip and sheet shall be measured at a distance not less than 40 mm from the rolling edge; the cut-edged steel strip and sheet shall be measured at a distance not less than 25 mm from the cutting edge.

8.1.2 When the width of the slitting steel strip is less than 50 mm, measure along the center of the width direction.

8.2 Width Width shall be measured perpendicular to the centerline of the steel strip or sheet.

8.3 Unevenness

8.3.1 Place the hot rolled thin steel plate freely on the plane, without applying any pressure except the weight of the steel plate itself; use a measuring tool of the corresponding precision level to measure the maximum distance between the lower surface of the hot

rolled thin steel plate and the platform (as shown in the Figure 1).

8.3.2 For the hot rolled thin steel plate with a length not greater than 2 000 mm, its length is the measuring length of unevenness; for the hot rolled thin steel plate with a length greater than 2 000 mm, any length of 2 000 mm can be cut arbitrarily for the measurement of unevenness.

chinastandards.org · PREVIEW