

Translated English of Chinese Standard: Q/BQB401-2019

www.ChineseStandard.net → Buy True-PDF → Auto-delivery.

Sales@ChineseStandard.net

BQB

ENTERPRISE STANDARD OF

BAOSHAN IRON AND STEEL CO., LTD

Q/BQB 401-2019

Replacing Q/BQB 401-2018

Dimension, Shape, Weight and Tolerances

for Cold-Rolled Steel Sheet and Strip

冷轧钢板及钢带的尺寸、外形、重量及允许偏差

Issued on: February 02, 2019

Implemented on: April 10, 2019

Issued by: Baoshan Iron and Steel Co., Ltd.

Table of Contents

Foreword	3
1 Scope	5
2 Normative References.....	5
3 Classification and Code.....	5
4 Dimension	6
5 Allowable Deviation of Dimension	7
6 Appearance	10
7 Measurement of Dimension and Shape	13
8 Weight	13
9 If the User Has Other Special Requirements for Dimension, Shape, Weight and Tolerances, they Can Be Negotiated when Ordering and Specified in the Contract.....	14
10 Numerical Rounding-Off Rules.....	14
Appendix A (Normative) Weight Calculation Method when Taking Theoretical Weight Method	16

Foreword

This Standard was drafted as per the rules specified in GB/T 1.1-2009 *Directives for Standardization – Part 1: Structure and Drafting of Standards*.

This Standard formulated by reference of EN 10131:2006, EN 10143:2006, and JIS G 3141:2017.

This Standard replaced Q/BQB 401-2018.

Compared with Q/BQB 401-2018, this Standard mainly made the following content modifications:

- Revise the lower limit of nominal width of product supplying from 700mm to 600mm;
- Revise the description of the relevant definition of thickness tolerance in 5.1;
- Revise the lower limit of the minimum nominal thickness for the file strength of PT.C thickness allowable deviation of 260 ~ <360MPa from 0.20mm to 0.30mm;
- Revise the width tolerance table in the original Table 7 into the width accuracy requirements for the separately specified untrimmed products; and add the basic accuracy control requirements of PW.W;
- Add new Table 8, which separately specifies the technical requirements for the width tolerance of the trimmed products;
- Revise Table 9 (original Table 8) Nominal thickness files and tolerance technical requirements of longitudinally-cut steel strip width tolerance;
- Revise the description in 6.2 sickle bend control requirements and supplement the sickle bend control requirements of longitudinally-cut steel strip;
- Revise Table 11 (original Table 10) nominal width file and corresponding index requirements for unevenness accuracy;
- Supplement the unevenness diagram of the steel sheet (see Figure 1).

The Appendix A of this Standard is normative.

This Standard was proposed by Manufacture and Management Department of Baoshan Iron and Steel Co., Ltd.

This Standard shall be under the jurisdiction of Manufacture and Management Department of Baoshan Iron and Steel Co., Ltd.

Dimension, Shape, Weight and Tolerances for Cold-Rolled Steel Sheet and Strip

1 Scope

This Standard specifies the requirements for classification and code, dimension, shape, weight and allowable deviation of cold-rolled steel sheet and strip.

This Standard is applicable to cold-rolled steel strips with a thickness of 0.17mm~3.50mm and a rolling width of 600mm~2080mm, and the steel sheet horizontally-cut from it and steel strip longitudinally-cut from it produced by Baoshan Iron and Steel Co., hereinafter referred to as steel sheet and strip.

NOTE: The cold-rolled products referred to in this Standard include cold-rolled uncoated products and cold-rolled coated products, etc.

2 Normative References

The following documents are essential to the application of this Standard. For the dated documents, only the versions with the dates indicated are applicable to this Standard; for the undated documents, only the latest version (including all the amendments) are applicable to this Standard.

GB/T 8170-2008 Rules of Rounding off for Numerical Values & Expression and Judgement of Limiting Values

3 Classification and Code

According to different product forms, the classification and code of the edge state and dimensional accuracy of steel sheets and strips shall meet the requirements of Table 1.

Table 3

Unit: mm

Recommended nominal thickness																
0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00
1.10	1.20	1.40	1.50	1.60	1.7	1.75	1.80	1.9	2.00	2.30	2.50	2.80	3.00	3.20	3.50	

5 Allowable Deviation of Dimension

5.1 Allowable deviation of thickness

5.1.1 The allowable deviation of thickness for steel sheets and strips conform to the provisions of Table 4. For longitudinally-cut steel strips, the allowable deviation of thickness shall be in accordance with the provisions of steel strips before longitudinally-cutting. If the purchaser has higher requirements for thickness accuracy, the purchaser can also order according to the PT.C super-high thickness accuracy given in Table 5.

5.1.2 With the consent of both the supplier and the purchaser, the users with special requirements on thickness accuracy can also order with asymmetric tolerances.

5.1.2.1 PT.AQ mode: The target thickness of the steel sheet and strip is the original nominal thickness minus 2%, and the positive allowable deviation of the thickness is the positive allowable deviation of the original nominal thickness minus 2% of the original nominal thickness. The negative allowable deviation of the thickness shall be controlled according to the PT.A requirements of the original nominal thickness given in Table 4.

5.1.2.2 PT.AD mode: Only for steel sheets and strips with a specified minimum yield strength of less than 260 MPa; the positive allowable deviation of thickness is 0; the negative allowable deviation of the thickness shall be controlled according to the PT.A requirements of the nominal thickness given in Table 4.

5.1.2.3 If the user has other special thickness accuracy requirements, they can be negotiated when ordering.

5.1.3 Under the PT.C, PT.AQ and PT.AD ordering modes, the allowable deviation of the thickness within the total length of 30m (within 15m on one side) on both ends of the steel strip is allowed to exceed the specified value by more than 20%.

5.1.4 For steel strips delivered with welds, the allowable deviation of the thickness in the range of 10m near the welds may exceed 50% of the specified value.

5.1.5 For hot-dip products whose total weight of double-sided coatings is no less than 450g/m², the allowable thickness deviation shall be increased by ± 0.01 mm.

6.2 Edge camber

6.2.1 The edge camber of steel sheet and steel strip refers to the maximum distance between the side edge and the straight line connecting the two ends of the measurement part. It is measured on the concave side of the product, as shown in Figure 2.

6.2.2 The edge camber of steel sheets and strips shall be no greater than 4 mm at any 2000 mm length. When the length of the steel sheet is no greater than 2000mm, the edge camber shall be no greater than 0.2% of the actual measured length of the steel sheet.

6.2.3 The edge camber of the longitudinal-cut steel strip shall be no greater than 2mm at any 2000mm length.

6.3 Unevenness

6.3.1 The unevenness of the steel sheet refers to the maximum distance BETWEEN the lower surface of the steel sheet measured when the steel plate is freely placed on the platform AND the platform. As shown in Figure 1.

6.3.2 According to the shape and location, the strain types of steel sheets can be divided into the following categories:

6.3.2.1 Bow: The residual curving in all directions of the steel sheet, which can be longitudinal (in the rolling direction) or transverse (vertical to the rolling direction).

6.3.2.2 Wave: Waves along the longitudinal direction of the steel sheet, rippling.

6.3.2.3 Edge wave: refers to the wave along the edge of the steel sheet.

6.3.2.4 Center buckle (center fullness; full center): The wave appears on the position of the middle part of the steel sheet, also called central fold.

6.3.3 The provisions for unevenness apply only to steel sheets. If the steel sheet is not leveled, only ordinary unevenness accuracy is applicable.

6.3.4 The unevenness of the steel sheet shall comply with the values specified in Table 11.

specified values of PF.A in Table 11 also apply to steel sheets cut by the user from steel strip.

7 Measurement of Dimension and Shape

7.1 The thickness measurement points are any points no less than 25mm (trimmed) or 40mm (untrimmed) from the edge, unless otherwise specified by the product standard.

7.2 Out of squareness (u)

7.2.1 When measured by the projection method, the out of squareness (u) is the vertical projection length of the wide side (width) of the steel sheet to the longitudinal side (length) of the steel sheet, as shown in Figure 2.

7.2.2 When measured by the diagonal method, the two diagonal lengths of the steel sheet shall be measured, and 1/2 of the difference between the diagonal lengths shall be calculated, i.e. $u = |X_1 - X_2| / 2$, as shown in Figure 3.

7.3 Edge camber

7.3.1 The measurement position of the edge camber of the steel strip shall be no less than 5000mm from the head or tail of the steel strip.

7.3.2 For steel sheets with a length of no more than 2000mm, the length of the steel sheet is equal to the measurement length of the edge camber; for steel sheets with a length of more than 2000mm, a length of 2000mm can be used for the measurement of the edge camber.

7.4 Unevenness

7.4.1 For steel sheets with a length of no more than 2000 mm, the length of the steel sheet is the measured length of the unevenness.

7.4.2 For steel sheets with a length of more than 2000mm, it is possible to arbitrarily cut the steel plate with a length of 2000mm to measure the unevenness.

8 Weight

The steel sheet is usually delivered at the theoretical weight; or it can be delivered at the actual weight. The theoretical weight calculation method is in accordance with the provisions of Appendix A. Steel strip is usually delivered by actual weight.

This is an excerpt of the PDF (Some pages are marked off intentionally)

Full-copy PDF can be purchased from 1 of 2 websites:

1. <https://www.ChineseStandard.us>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Select your country (currency), for example: USA (USD); Germany (Euro).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Tax invoice can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with download links).

2. <https://www.ChineseStandard.net>

- SEARCH the standard ID, such as GB 4943.1-2022.
- Add to cart. Only accept USD (other currencies - <https://www.ChineseStandard.us>).
- Full-copy of PDF (text-editable, true-PDF) can be downloaded in 9 seconds.
- Receiving emails in 9 seconds (with PDFs attached, invoice and download links).

Translated by: Field Test Asia Pte. Ltd. (Incorporated & taxed in Singapore. Tax ID: 201302277C)

About Us (Goodwill, Policies, Fair Trading...): <https://www.chinesestandard.net/AboutUs.aspx>

Contact: Wayne Zheng, Sales@ChineseStandard.net

Linkin: <https://www.linkedin.com/in/waynezhengwenrui/>

----- The End -----