

UDC

Stand Standard of PRC

P

GB 50205 – 2001

钢结构工程施工质量验收规范
Code for Acceptance of Construction Quality of Steel
Structures

Issued on Jan.1, 2002

Executed on Mar.1, 2002

Issued jointly by the General Administration of Quality Supervision, Inspection and Quarantine of PRC and the Construction Ministry of PRC

Stand Standard of PRC

钢结构工程施工质量验收规范
Code of Acceptance of Construction Quality of Steel Structures

GB 50205 – 2001

Mainly compiled by the Construction Ministry of PRC
Approved by the Construction Ministry of PRC
Effective Date: Mar. 1, 2002
China Planning Publishing House
(Beijing, 2001)

Stand Standard of PRC
Code of Acceptance of Construction Quality of Steel Structures
GB 50205 – 2001

Mainly compiled by the Construction Ministry of PRC
Approved by the Construction Ministry of PRC
Effective Date: Mar. 1, 2002
Issued by the China Planning Publishing House
(Address: 4th Floor, C Section of Guohong Building, No. 11 First Section of North Muxidi
Lane, West District of Beijing City)
(Post code: 100038; Tel: 6390643, or 63906414)
Distributed by the Beijing Distribution House of Xinhua Bookstore
Printed by the World Knowledge Printing Factory

Notice on the Issue of the State Standard of the *Code of Acceptance of Construction Quality of Steel Structures*

Construction Standard No. 11 [2002]

According to *the Notice on the Issue of the Plan of Preparing and Revising the Construction Standards during 2000 - 2001* (Document No. 87 [2001], issued by the Construction Ministry), the *Code of Acceptance of Construction Quality of Steel Structures*, compiled jointly by the General Architecture Research Institute of Metallurgy Ministry and other related organizations, has been reviewed by the related organizations and approved to be the state standard and number as GB 50205 – 2001. This Code will be put in force on Mar. 1, 2002. In this code, the mandatory clauses include 4.2.1, 4.3.1, 4.4.1, 5.2.2, 5.2.4, 6.3.1, 8.3.1, 10.3.4, 11.3.5, 12.3.4, 14.2.2 and 14.3.3, which shall be complied with strictly. Moreover, the previous version of *the Code of Acceptance of Construction Quality of Steel Structures (GB 50205-95)* and *the Standard of Inspection and Assessment of Construction Quality of Steel Structures (GB 50221-95)*, are to be abrogated on the same date.

The administration of this code as well as the explanation of the mandatory clauses in this Code are to be presided over by the Construction Ministry; the interpretation of the specific technical content by the General Architecture Research Institute of Metallurgy Ministry; and the issue/publication of this Code jointly by the Standard & Norm Institute of Construction Ministry and the China Planning Publishing House.

The Construction Ministry of PRC
Jan.10, 2002

Preface

This Code was compiled by revising *the Code of Acceptance of Construction Quality of Steel Structures (GB 50205-95)* and *the Standard of Inspection and Assessment of Construction Quality of Steel Structures (GB 50221-95)*, jointly by the General Architecture Research Institute of Metallurgy Ministry and other related organizations, and according to *the Notice on the Issue of the Plan of Preparing and Revising the Construction Standards during 2000 - 2001* (Document No. 87 [2001], issued by the Construction Ministry).

During the revision, the team responsible for the compile carried out extensive surveys, and summarized the practical experiences on the acceptance of construction quality of steel structures in China, and took the current version of the state standard of the *Uniform Standard of Acceptance of Construction Quality of Steel Structures (GB 50300)* as the basis and revised it allsidedly according to the guideline of “performing the inspection and evaluation separately, enhancing the acceptance, perfecting the methods/measures, and controlling the procedures” , and changed the key items several times, and sought recommendations widely from the related organizations and experts by various ways, and finalized the text of this Code after the final review.

This code is divided into 15 chapters, including General, Terms, Symbols, Basic Requirements, Admittance of Raw Materials and Finished Products, Welding Work, Connection Work of Fasteners, Processing Work of Steel Parts and Copper Components, Assembly Work of Steel Elements, Test Assembling Work of Steel Elements, Installation Work of Single-layer Steel Elements, Installation Work of Multilayer or High Steel Elements, Installation Work of Net-type Steel Structures, Preparation and Installation Work of Metal Contour Plates, Coating Work of Steel Structures, Acceptance of Subitem-works of Steel Structures, and 9 appendixes. The Work of Steel Structures is divided into 10 subitem-works in principle, which are presented in separate chapters respectively. Though the Admittance of Raw Materials and Finished Products isn't one of the subitem-works, it is presented in one independent chapter, aiming at emphasizing and enhancing the importance of the admittance inspection of raw materials and finished products and therefore ensuring the construction quality by controlling the quality of the source. Additionally, the Acceptance of Subitem-works of Steel Structures is also presented in an independent chapter in order to provide further convenience for the operation of the acceptance of construction quality.

This Code may be revised where necessary in the future. The information about the revision of any parts of this Code and the revised clauses will be published on the *Standardization of Construction* (one magazine).

This Code's clauses highlighted in boldface are mandatory clauses. In order to improve the quality of this Code, the related organizations shall pay attention to summarize the related experience and accumulated the related information, and shall, at any time, feed the related recommendations back to the General Architecture Research Institute of Metallurgy Ministry located at No. 33 Tucheng Road, Haidian District, Beijing, 100088) to provide the reference for future revision.

This Code was mainly compiled by the General Architecture Research Institute of Metallurgy Ministry.

The organizations assisting the compile of this Code include the following:

- Wuhan Steel Structures Co., Ltd;
- Beijing General Institute of Iron and Steel Design;
- China Jingye Construction Engineering Contract
- Yuanda Construction Supervision Company of Beijing City;

Shenzhen Jianshenghe Steel Structure Construction Engineering Co, Ltd of China
Construction Third Bureau;
Mechanical Construction Company of Beijing City;
Zhejiang Hangxiao Steel Structure Co, LTD;
Steel Structure Company of China Construction First Bureau;
Shandong Chucheng High Strength Fasteners Company;
Zhejiang Jinggong Steelbuilding Co., LTD;
Hilfi (China) Ltd.

This Code was drafted mainly by the experts listed as below:

Hou Zhaoxin	He Fentao	Yu Zhichuo	Wang Wentao	He Qiaosheng
He Xianjuan	Lu Kekuan	Liu Jingfeng	Shijin	Pao Guangjian
Cheng Guojing	Yi Minda	Ma Naiguang	Li Haifeng	Qian Weijun

Contents

1 General	(1)
2 Terms and Symbols	(2)
2.1 Terms	(2)
2.2 Symbols	(3)
3 Basic Requirements	(4)
4 Admittance of Raw Material and Finished Products	(6)
4.1 Ordinary requirements	(6)
4.2 Steel materials	(6)
4.3 Welding materials	(7)
4.4 Standard fasteners for connecting	(8)
4.5 Welding/soldering ball	(9)
4.6 Bolt ball	10
4.7 Closing boards, flare heads, sleeves	10
4.8 Metal contour plates	11
4.9 Coating materials	11
4.10 Others	12
5 Welding Work of Steel Structures	13
5.1 Ordinary requirements	13
5.2 Welding work of steel structures	13
5.3 Stud welding work	16
6 Connecting Work of Fasteners	18
6.1 Ordinary requirements	18
6.2 Connecting of ordinary fasteners	18
6.3 Connecting of high strength bolts	19
7 Processing Work of Steel Parts and Steel Components	21
7.1 Ordinary requirements	21
7.2 Cutting	21
7.3 Rectification and formation	22
7.4 Trimming of edges	24
7.5 Preparation of pipes and balls	25
7.6 Preparation of holes	27
8 Assembly Work of Steel Elements	29
8.1 Ordinary requirements	29
8.2 Welding of H-shape steel	29
8.3 Assembly	29
8.4 Milling of ends and installation of welding bevels	30
8.5 External dimensions of steel elements	31
9 Test Assembling Work of Steel Elements	32
9.1 Ordinary requirements	32
9.2 Test Assembling	32
10 Installation Work of Single-layer Steel Structures	33
10.1 Ordinary requirements	33
10.2 Bases and bearing surfaces	33
10.3 Installation and rectification	35
11 Installation Work of Multilayer or High Steel Structures	33

11.1 Ordinary requirements	33
11.2 Bases and bearing surfaces	33
11.3 Installation and alignment	35
12 Installation Work of Net-type Steel Structures	33
12.1 Ordinary requirements	33
12.2 Top plates of bearing surfaces, and bearing block-base	33
12.3 General assembly and installation	35
13 Preparation and Installation Work of Metal Contour Plates	52
13.1 Ordinary requirements	52
13.2 Preparation of metal contour plates	52
13.3 Installation of metal contour plates	54
14 Coating Work of Steel Structures	56
14.1 Ordinary requirements	56
14.2 Coating of anticorrosive paint layer of steel structure	56
14.3 Coating of fire-retardant coating layer of steel structure	58
15 Final Acceptance of Subitem-works of Steel Structure	60
Appendix A Quality Standard of Appearance of Welding Seam, and Allowable Variations of Sizes of Welding Seam	62
Appendix B Inspection Items of Connecting of Fastener	64
Appendix C Allowable Variations for Assembly of Steel Structure	71
Appendix D Allowable Variations for Test Assembling of Steel Structure	82
Appendix E Allowable Variations for Installation of Steel Structure	84
Appendix F Test Method for Thickness of Fire-retardant Coating Layer of Steel Structure	90
Appendix G Test of Safety and Functionality of Steel Structures and Test Items Needing Witness	92
Appendix H Examination Items of Visual Sensation of Steel Structures	93
Appendix J Record Forms for Batch Quality Acceptance of Steel Structures	94
Explanatory Notes for Wording of this Code	107
Additional Notes: Explanatory Notes for Clauses	109

1 General

1.01 This Code was prepared for enhancing the control of construction quality, unifying the acceptance of construction quality of steel structures, and ensuring the quality of steel structures.

1.02 This Code is applicable for the acceptance of the construction quality of various steel structures including single-layer steel structures, multilayer steel structures, high steel structures, net-type steel structures, and structures made of metal contour plates.

1.03 The requirements on the acceptance of construction quality, set forth in the technical document executed during the construction of steel structures and the contracts for undertaking the construction, shan't be less strict than the corresponding requirements specified in this Code.

1.04 This Code is in addition to and shall not be prejudicial to the *Uniform Standard of Acceptance of Construction Quality of Steel Structures (GB 50300)*.

1.05 During the acceptance of construction quality of steel structures, not only requirements stated in this Code shall be implemented, but also those set forth in related current state standards.

2 Terms and Symbols

2.1 Terms

2.1.1 Part

Part means the smallest unit composing a component or element, such as connection plate, flange plate and etc.

2.1.2 Component

Component means the unit composed of several parts, such as H-shape weldable steel, cantilever bracket and etc.

2.1.3 Element

Element means the steel structure's basic unit composed of parts or parts and components, such as beam, column/pillar, supporter and etc.

2.1.4 The smallest assembled rigid unit

The smallest assembled rigid unit means the smallest installation unit, used during the installation of steel structure, other than spare parts; Ordinarily, the smallest assembled rigid units are divided to two types including plane truss and cone.

2.1.5 Intermediate assembled structure

Intermediate assembled structure means the installation unit composed of spare parts and the smallest assembled rigid units, which is used during installation of steel structure and divided usually into two types including strip-shape type and block-shape type.

2.1.6 Set of high strength bolt

Set of high strength bolt is the general term of high strength bolt and the nut and gasket matching the bolt.

2.1.7 Slip coefficient of faying surface

Slip coefficient of faying surface means the ratio between the foreign force generating slip movement on friction surface of adapting piece and the sum of the high strength bolt's pre-tensile forcing on the friction surface vertically.

2.1.8 Test assembling

Test assembling means the assembling performed for verifying if the elements can

完整版本请在线下单

或咨询：

TEL: 400-678-1309

QQ: 19315219

Email: info@lancarver.com

<http://www.lancarver.com>

线下付款方式：

1. 对公账户：

单位名称：北京文心雕语翻译有限公司

开户行：中国工商银行北京清河镇支行

账 号：0200 1486 0900 0006 131

2. 支付宝账户：info@lancarver.com

注：付款成功后，请预留电邮，完整版本将在一个工作日内通过电子 PDF 或 Word 形式发送至您的预留邮箱，如需索取发票，下单成功后的三个工作日内安排开具并寄出，预祝合作愉快！



银联特约商户