

CCS C68



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

GB 11341-2008

Safety rules for overhead chain conveyers

悬挂输送机安全规程

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Foreword

The entire content of this standard is mandatory. This standard is a revision of GB 11341-1989 "Safety rules for overhead chain conveyors". Compared with GB 11341-1989, the main changes of this standard are as follows:

- The "Foreword" is added;
- The arrangement order is adjusted;
- The chapter "Terms and definitions" is added (Chapter 3 of this edition);
- The normative appendix "Maintenance content and cycle of each component of an overhead conveyor" is added (see Appendix A). Appendix A of this standard is a normative appendix. This standard is proposed by the State Administration of Work Safety. This standard shall be under the jurisdiction of the National Technical Committee on Work Safety of Standardization Administration of China (SAC/TC288). Drafting organizations of this standard. Kailuan (Group) Limited Liability Corporation, Tangshan Research Institute of China Coal Research Institute, Jinan Southern Conveying Equipment Co., Ltd., HBIS Group Tangsteel Company. The main drafters of this standard. Pei Hua, Zhang Jian, Mei Haibin, Liu Yongge, Cheng Yugui, Chen Hongxiang, Xia Xiaoguang. The previous editions of the standard replaced by this standard are as follows:
 - GB 11341-1989. Safety rules for overhead chain conveyors

1 Scope

GB 11341-2008 is the Chinese national standard on safety rules for overhead chain conveyors. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold

or carried out in China. It was issued on 11 December 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 October 2009. Classification: ICS , CCS C68. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the safety technical requirements for the design, manufacture, installation, use, maintenance, and management of overhead chain conveyors. This standard is applicable to general-purpose overhead chain conveyors, accumulation overhead conveyors, and ground chain conveyors; for monorail overhead trolley conveyors, this standard can be used for reference.

2 Normative references

The provisions in the following documents become the provisions of this standard through reference in this standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Part, however, parties who reach an agreement based on this standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies to this standard. GB 2893 Safety colours

GB 2894 Safety signs and guideline for the use

GB 3836.15 Explosive atmospheres - Part

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1 track Rigid carrying parts that constitute a conveyor line, and on which trolleys and chains run.

3.2 safety device for vertical curves A safety device that can jam the moving parts on the inclined section in time to prevent them from sliding down, when a traction part is accidentally broken. [JB/T 7011-1993, definition 5.6]

3.3 drop section A device that can lift and lower the carrying trolleys on a conveying line. [JB/T 7011-1993, definition 7.8]

3.5 clamp A component that fixes the sling for the conveyed object.

4 General requirements

4.1 All potential risk factors shall be excluded or reduced as much as possible by design.

4.2 For hazards that cannot be avoided or adequately limited by design, necessary safety guards (guards, safety devices) shall be adopted.

4.3 For remaining dangers that cannot be eliminated or reduced by design, and for which the safety guards are ineffective or not fully effective, the operators shall be notified and warned by the information.

5 Requirements for design, manufacture, and installation

5.1 The safety factor of a track shall not be less than 2, and the allowable deflection shall not be greater than 1/300 of the span. The allowable deflection of the track of a monorail overhead trolley conveyor shall not be greater than 1/400 of the span.

5.3 The safety factor of hanging plates and slings shall not be less than 5.

5.4 The safety factor of the main force-bearing parts of the carrying trolley shall not be less than 5.

5.5 The drop section shall be lifted by two wire ropes or chains, and buffer devices shall be provided at the ends. The safety factor calculated according to the rated load of each wire rope shall not be less than 7, and the safety factor of the chain shall not be less than 10.

5.6 All starting and stopping devices shall be clearly marked and easily accessible. Emergency stop switches shall be installed on the line of an overhead conveyor, generally not less than one within a range of 30 m.

5.7 The equipment shall be equipped with sound and light warning signals to warn other personnel to pay attention to safety before the equipment is started.

5.8 The drive device shall be equipped with an overload protection device. When the tension of the tractive chain exceeds

1.5 times the allowable value, the power supply of the motor shall be cut off. The adjustment method shall be marked on the product manual and the corresponding part of the equipment shall be marked.

5.12 At the joints of the movable rail sections (such as drop sections or turnout devices) of an accumulation overhead conveyor and a monorail overhead trolley conveyor, safety devices that prevent the carrying trolleys from falling shall be installed.

5.13 Slings and carrying trolleys shall be connected reliably and shall not be disengaged by themselves. Slings shall be able to prevent objects from slipping or falling due to tilt during operation.

5.16 Interlocking devices shall be set near the turnout of an accumulation overhead conveyor to prevent the trolleys of the working conveying line from being sent to the non-working conveying line or the full-position conveying line.

5.17 All common lubricating points shall be easy to fill with oil, and the protective cover shall not be removed when lubricating.

5.21 When an overhead conveyor passes through a floor, the opening shall be equipped with protective railings.

5.22 Vertical ladders, inclined ladders, guardrails, and platforms shall meet the requirements of GB 4053.1~4053.4 respectively.

6 Requirements for use, maintenance, and administration

6.1 Except for designated personnel, no one shall start the equipment or interfere with the normal operation of the equipment.

6.2 The operators and maintenance personnel of the overhead conveyor shall pass the safety technical training and examination and hold the work permit.

6.6 The operators shall load objects according to the regulations, and the overhead conveyors shall not be overloaded. The loading operation procedures shall be indicated in the obvious position near the loading station, and the procedures shall include the allowable loading amount, positioning method, and limit size.

6.7 The equipment, especially the driving devices, tractive chains, and slings, shall be kept in good working condition and maintained in time. All loading, unloading, and operating stations as well as overhead conveyor passages shall be kept clean.

6.8 If the part where the safety guards are to be removed is located in the work area or where people pass, the part shall be separated by a fence to prevent people from approaching.

6.10 Manual lubrication shall not be carried out during the operation of the equipment, unless the location of the parts to be lubricated allows the operation; or special devices are provided and the safety can be ensured, then the operation can be carried out. If the shield needs to be opened for lubrication, the equipment shall be stopped for lubrication.

6.11 The tractive chain shall be lubricated regularly with lubricating oil, not lubricating grease.

6.12 It is strictly forbidden that objects (ladders, springboards, etc.) lean on or are placed on the chains or tracks. If the maintenance personnel have to do so, the equipment shall be stopped.

6.15 The maintenance content and cycle of each component of an overhead conveyor shall be carried out in accordance with the provisions in Appendix A.

6.16 The inspection, adjustment, maintenance, and cleaning of overhead conveyor equipment shall comply with the requirements of the manufacturer's technical documents.