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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 10595-2017

Replacing GB/T 10595-2009

Belt conveyors

带式输送机

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Standardization Administration of China

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1 Scope

GB/T 10595-2017 is the Chinese national standard on belt conveyors, in the field of materials handling equipment. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 29 December 2017 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 July 2018. Classification: ICS 53.040.10, CCS J81. 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 type and basic parameters, technical requirements, test methods, inspection rules, marking, packaging and storage of belt conveyors (hereinafter referred to as the conveyors). This Standard is applicable to conveyors conveying bulk materials and finished articles. For conveyors conveying toxic, harmful, flammable, explosive, highly corrosive and radioactive materials, and conveyors with special requirements and types, the general parts may also be taken as a reference.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 191 Packaging - Pictorial Marking for Handling of Goods (GB/T 191-2008, ISO 780.1997, MOD)

GB/T 226 Test Method for Macrostructure and Defect of Steel by Etching

GB/T 700 Carbon Structural Steels

GB/T 985.1 Recommended Joint Preparation for Gas Welding, Manual Metal Arc Welding, Gas-shield Arc Welding and Beam Welding

GB/T 985.2 Recommended Joint Preparation for Submerged Arc Welding

GB/T 1184 Geometrical Tolerancing - Geometrical Tolerance for Features without Individual Tolerance Indications (GB/T 1184-1996, eqv ISO 2768-2.1989)

GB/T 1979 Standard Diagrams for Macrostructure and Defect of Structural Steels

GB/T 2828.1 Sampling Procedures for Inspection by Attributes - Part

1.Sampling Schemes Indexed by Acceptance Quality Limit (AQL) for Lot-by-lot Inspection

GB/T 3323 Radiographic Examination of Fusion Welded Joints in Metallic Materials

GB/T 3767 Acoustics - Determination of Sound Power Levels and Sound Energy Levels of Noise Sources Using Sound Pressure - Engineering Methods for an Essentially Free Field over a Reflecting Plane (GB/T 3767-2016, ISO 3744.2010, IDT)

GB/T 4053 Safety Requirements for Fixed Steel Ladders and Platform

GB/T 4323 Pin Coupling with Elastic Sleeve

3 Type and Basic Parameters

3.1 Type A typical structure of the conveyors is shown in Figure 1.

3.2 Basic Parameters

3.2.1 Belt breadth The belt breadth of the conveyors shall preferably adopt the numerical values specified in Table 1.

3.2.2 Nominal belt speed The nominal belt speed of the conveyors shall preferably adopt the numerical values specified in Table 2.

4.1 Conditions of Operating Environment

4.1.1 The temperature of the operating environment of the conveyors is 25 C ~ + 40 C.

4.1.2 The operating altitude of the conveyors shall not exceed 1,000 m. NOTE. when exceeding the above specified range, it shall be resolved through negotiation between the user and the manufacturer.

4.6 Pulley

4.6.1 The minimum wall thickness b1 of the pulley body shall comply with the stipulations of

4.6.3 The quality classification limit of the defects of the pulley body and the welding seam of the plate shall comply with the requirements of Level-B in GB/T 19418.When ultrasonic testing is adopted, the inspection level shall not be lower than Level-B in GB/T 11345; the acceptance inspection level shall comply with the requirements of Level-2 in GB/T

29712.Alternatively, when radiographic inspection is adopted, its quality level shall not be lower than the requirements of Level-2 in GB/T 3323.

4.6.4 The internal stress of the pulley body with the resultant force greater than 80 kN shall be eliminated.

4.6.5 The diameter deviation of the outer circle of the pulley shall comply with the stipulations of Table 8.

4.6.6 When the pulley is a rubber surface pulley, its rubber layer shall be firmly bonded to the surface of the pulley, and there shall be no defects like delamination or foaming. The physical and mechanical properties of the top rubber shall comply with the stipulations of Table

9.The physical and mechanical properties of the primer shall comply with the stipulations of Table 10.

4.6.7 The non-destructive testing quality of the pulley shaft shall comply with the requirements of quality level 3 of straight probes in GB/T 6402.In addition, it shall also comply with the following conditions.

4.7 Idler Roller

4.7.1 The steel pipes for the idler roller shall not be lower than the requirements of GB/T 13793.

4.7.2 During the assembly of the idler roller, the bearing and sealing ring (labyrinth seal) shall be filled with No.2 lithium-based lubricating grease whose performance is not lower than what is specified in GB/T 7324.The grease filling amount of the bearing is 40% ~ 60% of the bearing clearance; in a seriously polluted environment, the grease filling amount shall reach 75% ~ 80%; the space between the sealing rings shall be full.

4.7.3 The radial circular runout of the outer circle of the idler roller shall comply with the stipulations of Table 13.

4.7.4 After the idler is assembled, under the effect of 500 N axial pressure, the axial displacement of the roller shall not exceed

0.7 mm.

4.8 Conveyor Belt

4.8.1 The sizes of the conveyor belt shall comply with the stipulations of GB/T 4490.

4.8.2 In accordance with the service conditions, the selected conveyor belt shall comply with the stipulations of the relevant standards, such as. GB/T 7984 and GB/T 9770, etc.

4.8.3 The vulcanized joints of the conveyor belt shall comply with GB/T 7984, GB/T 9770