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

GB/T 1171-2017

Replacing GB/T 1171-2006

Classical V-belt for general drive

一般传动用普通V带

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009. This Standard replaces GB/T 1171-2006 "Classical V-belt for general drive". Compared with GB/T 1171-2006, the main technical changes except editorial modification are as follows: - DELETE the requirements for adapting the rope structure in the scope (see Clause 1 of this Standard, Clause 1 of 2006 edition); - MODIFY the representation method for the mark (see

4.2 of this Standard,

3.3 of the 2006 version); - DELETE the requirements for the adhesion strength of ropes in physical properties and its test methods (see

5.3 of this Standard,

7.3 of 2006 edition); - MODIFY the inspection of the dimensions in the sampling (see

6.1 of this Standard,

6.1 of 2006 edition); - ADD the tables of reference rated power P1 and power increment DeltaP1 of a single piece of V-belt (see Annex A). This Standard was proposed by China Petroleum and Chemical Industry Federation. This Standard shall be under the jurisdiction of Subcommittee on Friction-type Belt Drive of National Technical Committee on Pulleys and Belts of Standardization Administration of China (SAC/TC 428/SC 3). Drafting organizations of this Standard. Sanlux Co., Ltd., Zhejiang Sanwei Rubber Item Co., Ltd., Zhejiang Hongda Rubber Co., Ltd., Wuxi Zhonghui Rubber Technology Co., Ltd., Ningbo Kaichi Rubber Belts Co., Ltd., Qingdao Product Quality Supervision and Testing Research

Center. Main drafters of this Standard. Shi Shuixiang, Liu Youliang, Dai Jianqiu, Zhu Shusheng, Ying Jianli, Li Xiaodong. The previous released versions replaced by this Standard are as follows: - GB 1171-1974, GB 1171-1989, GB/T 1171-1996, GB/T 1171-2006. Classical V-belt for general drive

1 Scope

GB/T 1171-2017 is the Chinese national standard on classical v-belt for general drive, in the field of mechanical systems and components. 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 28 February 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 September 2017. Classification: ICS 21.220.10, CCS G42. 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 structure, types and marks, requirements, sampling, test methods and marking, labeling, packaging, transportation and storage of classical V-belts (hereinafter referred to as V-belts) for general drive. This Standard applies to classical V-belts used for general mechanical drive devices. This Standard does not apply to mechanical drive devices such as automobiles and motorcycles.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 3686 Belt drives - V-belts and V-ribbed belts - Tensile strength and elongation test method

GB/T 11544 Belt drives - Classical and narrow V-belts - Dimensions (system based on datum width)

GB/T 12833 Rubber and plastics - Analysis of multipeak traces obtained in determinations of tear strength and adhesion strength

3 Structures

3.1 V-belts are divided into two types according to the structure. wrap-edge V- belt, cut-edge V-belts (classical cut-edge V-belts, grooved cut-edge V-belts and

bottom-rubber-embedded-cloth cut-edge V-belts).

4 Types and marks

4.1 Types The V-belt shall have a symmetrical trapezoidal cross-section, of which the ratio of height to pitch width is about 0.7. It is divided into seven types. Y, Z, A, B, C, D and E.

5 Requirements

5.1 Appearance quality The appearance quality of V-belts shall comply with the specifications of Table 1.

5.2 Dimensions The reference length limit deviation, exposed height, center distance variation, and matching difference of V-belts shall comply with the specifications of GB/T 11544.

5.4 Fatigue performance For A-type and B-type V-belts, the torque-free fatigue life is not less than 1.0×10^7 times, and the 24 h center-to-center distance change rate is not more than 2.0 %.

6 Sampling

6.1 V-belts shall be inspected for appearance quality one by one. They may be sampled for inspection of dimensions.

6.2 The V-belts of the same type and the same material shall be in a batch of not more than 200000 pieces.

6.3 If there are any unqualified items in the appearance quality, dimensions and physical properties of V-belts, double-quantity samples shall be taken in this batch to re-test the unqualified items.

6.4 For A-type and B-type V-belts of the same type and the same material, two samples shall be taken for the fatigue test of V-belts. If there is any unqualified item, two additional samples shall be taken in the batch.

6.5 In the event of changing the line of production, transferring the factory, resumption of production after production stoppage, or a major change in structure, material or process, the V-belts shall be subjected to the type inspection.

7 Test methods

7.1 For the appearance quality of V belts, the damage of the angled canvas and the length of the flash are measured with a tape or a caliper, and the rest are checked by visual inspection.

7.4 For the adhesion strength test between cloth and top rubber, first cut two samples on the top of the V-belt.

7.5 The no-torque fatigue life and pulley center-to-center distance change rate of V-belts is tested in accordance with the specifications of GB/T 15328.

8 Marking, labeling, packaging, transportation and storage

8.1 Marking Every V-belt shall be marked with clear sign that can't be washed away, which shall include at least the following.

8.2 Labeling and packaging V-belts shall be packed in suitable packages. The label shall include at least the following.

8.3 Transportation and storage

8.3.1 During transportation and storage, V-belts shall be kept away from direct sunlight or rain and snow, and kept clean;

8.3.2 During storage, the warehouse temperature should be kept at $-18\text{ }^{\circ}\text{C} \sim 40\text{ }^{\circ}\text{C}$, and the relative humidity should not exceed 70 %.