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Replacing JB/T 2985-2001

Bi-metal collar for construction machinery

工程机械用双金属轴套

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces JB/T 2985-2001 "Bi-metal collar for construction machinery". Compared with JB/T 2985-2001, the main technical changes are as follows:

- MODIFY the scope of application of bi-metal collar (see Chapter 1; Chapter 1 of the 2001 edition);
- REPLACE part of the normative references in the normative references (see Chapter 2; Chapter 2 of the 2001 edition);
- MODIFY the marking method of bi-metal collar (see 3.2; 3.2 in 2001 edition);
- ADD the requirements for the geometric tolerance level of bi-metal collar (see 4.3);
- MODIFY the drawing of the bi-metal collar (see Figure 1; Figure 1 and Figure 2 of the 2001 edition);
- MODIFY the main dimensions of the bi-metal collar (see Table 4; Table 4 and Table 5 of the 2001 edition);
- ADD the requirements for the tensile breaking load of the bi-metal collar sleeve and the thrust side (see 4.8);
- ADD and MODIFY the test method of bi-metal collar (see Chapter 5; Chapter 5 of the 2001 edition);
- MODIFY and ADD the packaging requirements for bi-metal collar (see 7.3 and 7.6; 7.3 and 7.6 of the 2001 edition).

This standard was proposed by China Machinery Industry Federation.

This standard shall be under the jurisdiction of the National Earthmoving Machinery Standardization Technical Committee (SAC/TC 334).

Drafting organizations of this standard: Jizhong Bearing Co., Ltd., Tianjin Construction Machinery Research Institute.

The main drafters of this standard: Men Baojian, Men Xiaoxin, Li Guangqing.

This standard replaces the standard previously issued as follows:

- JB/T 2985-1993, JB/T 2985-2001.

Bi-metal collar for construction machinery

1 Scope

This standard specifies the classification, naming, requirements, test methods, inspection rules, markings, packaging, transportation and storage of bi-metal collar for crawler construction machinery.

This standard applies to the bi-metal collar (hereinafter referred to as collar) of the supporting wheels, guide wheels and other transmission parts of the walking mechanism of crawler construction machinery.

2 Normative references

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

GB/T 228.1 Metallic materials - Tensile testing - Part 1: Method of test at room temperature

GB/T 231.1 Metallic materials - Brinell hardness test - Part 1: Test method

GB/T 699 Quality carbon structural steels

GB/T 1174 Cast bearing metals

GB/T 1958 Geometrical product specifications (GPS) - Geometrical tolerance - Verification prescription

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 3260.4 Methods for chemical analysis of tin - Part 4: Determination of lead content - Flame atomic absorption spectrometric method

GB/T 3850 Impermeable sintered metal materials and hard metals - Determination of density

GB/T 4103.1 Methods for chemical analysis of lead and lead alloys - Part 1: Determination of tin content

4.8 The tensile breaking load of the collar and thrust side shall be above 98 kN.

4.9 The alloy layer of the collar shall be dense, free of defects such as cracks, pinholes, rust and foreign inclusions; the inner surface shall be smooth, without scratches, bruises and indentations.

4.10 There shall be no pits or other defects on the surface of the steel layer.

5 Test method

5.1 The chemical composition of the alloy layer of the sleeve shall be inspected in accordance with the provisions of GB/T 3260.4 and GB/T 4103.1.

5.2 The hardness of the alloy layer of the collar shall be inspected according to the provisions of JB/T 231.1.

5.3 The metallographic structure of the alloy layer of the collar shall be inspected in accordance with the provisions of GB/T 13298.

5.4 The density of the alloy layer of the sintered collar shall be inspected in accordance with the provisions of GB/T 3850.

5.5 The outer and inner diameters of the sintered rolled collar shall be inspected in accordance with the provisions of GB/T 12613 (all parts).

5.6 The thickness of the alloy layer of the collar shall be measured on the radial section of the collar by a non-magnetic thickness gauge. The position of the cross-section shall be in accordance with the provisions of GB/T 1958.

5.7 The geometric tolerance of the collar shall be inspected in accordance with the provisions of GB/T 1958.

5.8 The welding strength of the collar and the thrust edge shall be inspected in accordance with the provisions of GB/T 228.1.

5.9 The bond strength between the collar steel layer and the alloy layer shall be inspected in accordance with the provisions of GB/T 228.1 and GB/T 1174.

6 Inspection rules

6.1 Exit-factory inspection

Each collar must be inspected by the manufacturer's inspection department before leaving the factory. The inspection items include inner diameter, outer diameter, thrust ring thickness, alloy layer thickness, surface quality. The

- b) Product name and product specifications;
- c) Quantity and mass;
- d) Date of production.

7.4 Each packing box shall be accompanied by a certificate of conformity stamped by the inspector of the manufacturer's quality inspection department.

7.5 Put the packing box which packs the collar into a dry packing carton lined with waterproof paper. There shall be protective fillers in the carton, to ensure that the parts will not be damaged during normal transportation.

7.6 The outer surface of the packing carton shall at least be marked with:

- a) Manufacturer's name, address and telephone number;
- b) Product name and product specifications;
- c) Quantity and total mass;
- d) Signs such as "Handle with care", "avoid moisture", "avoid pressure", "height restrictions";
- e) Packing date.

7.7 The collars packed in cartons shall be stored in a ventilated and dry warehouse. Under normal storage conditions, the manufacturer shall ensure that the collar is free of corrosion within 12 months from the date of exit-factory.

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