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

GB 26410-2011

Explosion-proof fan

防爆通风机

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Foreword

The standard Chapter 3, "requirements" 3.3.1,3.3.2,

3.6 mandatory, the rest are recommended. The standard proposed by China Machinery Industry Federation. This standard by the National Standardization Technical Committee fan (SAC/TC187) centralized. Drafting of this standard. Shenyang Blower Research Institute, Zhejiang upper hand Industry Corp., Ltd. Shangyu fan. The main drafters of this standard. Chen Fengyi, Lian-fu, Cheng Hua, Xu Baohua, Zhu Ming Hao, Hongji light, Zhang Qi, Xu Lanhuan. Explosion-proof fan

1 Scope

GB 26410-2011 is the Chinese national standard on explosion-proof fan, in the field of fluid systems and general-purpose components. 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 12 May 2011 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 January 2012. Classification: ICS 23.120, CCS J72. 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 general use explosion-proof fans (hereinafter referred to as fan) requirements, test methods, inspection rules, guarantee period, marking and package. This standard applies to transport flammable, explosive gas, general purpose fan. Its maximum transmission medium temperature does not exceed 80 °C, the amount of dust And other solid impurities content is not greater than 100mg/m³, a diameter of not more than 1mm. This standard does not apply for special purposes explosion-proof fan, such as marine explosion fan, coal mine explosion-proof ventilators.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 1236 Industrial fans using standardized airways swell performance test (GB/T 1236-2000, ISO 5801.1997, IDT)

GB/T 2888 fan and blower noise measurement method

GB/T 3235 basic fan type, size parameters and characteristics

GB 3836.1-2000 Electrical equipment for explosive gas atmospheres - Part 1. General requirements (eqv IEC 60079-0.1998)

GB 3836.2-2000 Electrical apparatus for explosive gas atmospheres - Part 2. flameproof "d" (eqv IEC 60079-1.1990)

GB 3836.3-2000 Electrical equipment for explosive gas atmospheres Part 3. Increased Safety "e" (eqv IEC 60079-7.1990)

GB/T 9438 aluminum alloy castings GB/T 13306 signs

GB/T 19074 Industrial fans - Mechanical safety fan guard (GB/T 19074-2003, ISO 12499. 1999, IDT)

JB/T 6444 fans packaging technology

JB/T 6445 Industrial Fan impeller speed test

JB/T 6886 fan painting technical conditions

JB/T 6887 Technical condition for cast iron fan

JB/T 6888 fan steel castings technical conditions

3.1 Fan performance

3.1.1 at rated speed and within a predetermined flow rate range, the measured deviation fan aerodynamic performance and aerodynamic performance should meet the provisions of the following Provisions.

a) at a predetermined flow rate, machine number less than or equal to .10 fan pressure value does not exceed 8% to 5% of the value; gauge .10 fan pressure is greater than the value does not exceed -5% to 5% of the value.

b) Fan efficiency of not less than 8% of the corresponding point of efficiency.

3.1.2 Fan noise sound level than A LSA best efficiency operating point values should be consistent with the provisions of JB/T 8690's.

3.1.3 Fan bearing temperature and vibration velocity support shall meet the following requirements.

a) in the bearing surface of the measured bearing temperature not higher than the ambient temperature 40 °C.

b) rigid support RMS vibration velocity shall not exceed 4.6mm/s, flexible support RMS vibration velocity shall not exceed 7.1mm/s.

3.2.1 Basic design requirements

3.2.1.1 under specified operating conditions, fans and auxiliary equipment according to last at least 10a (except wearing parts), the first overhaul Safe operation shall be not less than 18000h time before the design.

3.2.1.2 Fan rigid shaft critical speed should be not less than 1.3 times the maximum operating speed.

3.2.1.3 Basic fan type, size parameters and characteristics should be consistent with the provisions of GB/T 3235's.

3.2.1.4 Fan in the structure, adjacent to the requirements of the rotating member and the stationary member to avoid grazing, to prevent sparks. Other aspects such as structure Type, strength, stiffness, etc. should be met. axial fan should be consistent with the relevant provisions of JB/T 10562, the centrifugal fan should be consistent with JB/T 10563 The

relevant provisions of other fans shall comply with the relevant standards.

3.2.2 Impeller

3.2.2.1 Impeller shall be subject to the test speed, impeller operate at a maximum operating speed of not less than 110% of the speed, duration is not Less than 2min, and in accordance with the provisions of JB/T 6445's.

3.2.2.2 impeller balance should be corrected, balanced quality rating shall comply with the provisions of JB/T 9101's.

3.2.2.3 impeller rivet rivet through-hole diameter according to Table 1, the riveting quality requirements should be consistent with the provisions of JB/T 10214 of. Table 1 rivet through-hole diameter in millimeters Rivet diameter d 2 2.5 3 3.5 4 5 6 8 10

3.3 Main parts and materials

3.3.1 Impeller aluminum alloy material, the inlet chamber, the housing is necessary to use carbon steel.

3.3.2 Fan impeller with steel material, the centrifugal fan inlet chamber port ring and rivets material must be made of brass or aluminum; Axial Fan The corresponding part of the inner steel impeller enclosure must be made of brass or aluminum ring and the corresponding rivet.

3.3.3 Other materials should be used in rotating and stationary parts grazing non-sparking materials, technical requirements should be consistent with JB/T 10562 And JB/T 10563 requirements.

3.4.1 Casting Requirements

3.4.1.1 quality iron castings shall comply with JB/T 6887's.

3.4.1.2 quality steel castings shall comply with JB/T 6888's.

3.4.1.3 quality aluminum alloy castings shall comply with GB/T 9438's.

3.4.2 Maohan requirements

3.4.2.1 welding quality should be consistent with the provisions of JB/T 10213 of.

3.4.2.2 Maohan manufacturing shall comply with JB/T 10214 of.

3.4.2.3 Other welding requirements should be consistent with JB T 10562 and JB/T 10563 requirements /.

3.5 assembly requirements

3.5.1 centrifugal fan inlet chamber and impeller inlet port ring circumferential radial