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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 28381-2012

Minimum allowable values of energy efficiency and evaluating values of energy conservation for centrifugal blower

离心鼓风机能效限定值及节能评价值

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Foreword

For the purpose of this standard, subclause

1 Scope

GB 28381-2012 is the Chinese national standard on minimum allowable values of energy efficiency and evaluating values of energy conservation for centrifugal blower, in the field of energy and heat transfer engineering. 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 May 2012 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 2012. Classification: ICS 27.010, CCS F01. 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 minimum allowable values of energy efficiency, evaluating values of energy conservation, and test methods for centrifugal blowers. This standard applies to single-stage dual-support low-speed centrifugal blowers; multi-stage low-speed centrifugal blowers; single-stage dual-support high-speed centrifugal blowers (including single-side impeller of dual-inlet blower); and multi-stage high-speed centrifugal blowers.

2 Normative references

The following normative documents are indispensable for application of this standard. For dated normative documents, only the edition dated with the day applies to this standard. For undated normative documents, the latest edition (including all amendments) applies to this standard.

JB/T 2977 Technical terms for industry fans, turbo-blowers and compressors

JB/T 3165 Thermodynamic performance test for centrifugal & axial blower and compressor

JB/T 7258 Centrifugal blower for general purpose

3 Terms and definitions

The following definitions apply to this standard, in addition to those defined in JB/T 3165 and in JB/T 2977.

3.2 Evaluating values of energy conservation for centrifugal blower the minimum guaranteed allowable values of variable efficiency which shall be achieved with respect to energy conservation for centrifugal blower, under the specified standard conditions of testing.

4 Classification of products

By the number of stages, structure and number of revolutions, a centrifugal blower may be classifed as single-stage cantilever-fitted low-speed centrifugal blower; single-stage dual-support low-speed centrifugal blower; multi-stage low-speed centrifugal blower; single-stage cantilever-fitted high-speed centrifugal blower; single-stage dual-support high-speed centrifugal blower; and multi-stage high-speed centrifugal blower etc.

5 Technical requirements

5.1 Basic requirements Product design, manufacturing and quality of centrifugal blower shall comply with provisions of JB/T 7258.

6 Evaluating values of energy conservation for multi - stage low - speed centrifugal blowers b 2 /D

2 Number of stages Z The highest polytropic efficiency of the centrifugal blower within the operating range, etapol , % Impeller diameter, D 2 , in mm Less than 300 301 to 400 401 to 600 601 to 800 More than 801 Less than 0.020 2 to 3 54.5 56.0 57.0 58.5 57.5 4 to 6 54.0 55.5 56.5 58.0 57.0

0.021 to 0.030 2-3 68.5 71.5 72.0 73.5 74.0 4 to 6 68.0 71.0 71.5 73.0 73.5

0.031 to 0.040 2 to 3 70.5 73.0 73.5 74.5 75.5 4 to 6 70.0 72.5 73.0 74.0 75.0

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