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

GB/T 38182-2019

Compressed air - Energy efficiency - Assessment

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Foreword

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

This standard uses the redrafting method to modify the ISO 11011.2013 "Compressed Air Energy Efficiency Assessment".

The technical differences between this standard and ISO 11011.2013 and their reasons are as follows.

--- Rewritten the provisions of the scope chapter, according to the requirements of GB/T 1.1;

---About the normative reference documents, this standard has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

* Replace ISO 1217 with GB/T 3853 (see Chapter 3);

* Replace ISO 5598 with GB/T 17446 (see Chapter 3);

* Added national standard GB/T 13277.1 (see 8.9.2 and Table C.8) to be cited;

--- The term "compressed air system" has been added to the "gas storage tank", which is an important part of the air system (see

3.1.6);

--- According to the rules of GB/T 1.1, avoid using the suspension section, delete the suspension section in 4.1 and Appendix B, and adjust the suspension section in 8.2.

To 8.1 and increase the article number (see 8.1.4);

--- According to the rules of GB/T 1.1, adjust the structure below 4.1, after adjustment, this standard corresponds to 4.1.1~4.1.4

ISO 11011.2013, 4.1.1.1~4.1.1.4 (see 4.1);

--- Deleted the instructions for the use of imperial units, because the current standard in China usually does not use imperial units (see 6.2.1).

For ease of use, the following editorial changes have been made to this standard.

--- Pressure unit replaces "bar" with "MPa";

--- Removed references to ISO 11011.2013.

This standard was proposed by the China Machinery Industry Federation.

This standard is under the jurisdiction of the National Compressor Standardization Technical Committee (SAC/TC145).

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1 Scope

This standard specifies the basic requirements and content of the compressed air system assessment (hereinafter referred to as the assessment), including terms and definitions, roles and positions.

Responsibilities, assessment methods, parameters and measurements, collection and evaluation of raw data, analysis of assessment data, reports and assessments of assessment results.

The basic description of the assessment is given in Appendix A of this standard, and various types of data collection instructions are provided in Appendix B~Appendix E.

This standard applies to energy efficiency assessment activities of compressed air systems, including.

--- Analyze the evaluation data;

--- Record and report the evaluation results;

--- Determine the estimated energy savings.

Note. This standard evaluation considers the entire system, from input energy up to the use of these energies to complete the required work. The compressed air system can be specifically

Divided into three functional subsystems.

--- Gas supply. conversion of initial energy to compressed air energy;

--- aspiration. the transmission of compressed air energy from the point of generation to the point of use;

--- Gas. All compressed air consumption, including productive use and various forms of loss.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 3853 Positive displacement compressor acceptance test (GB/T 3853-2017, ISO 1217.2009, MOD)

GB/T 13277.1 Compressed air Part 1. Contaminant purification grade (GB/T 13277.1-2008, ISO 8573-1.2001, MOD)

GB/T 17446 fluid drive system and component vocabulary (GB/T 17446-2012, ISO 5598.2008, IDT)

3 Terms and definitions

The following terms and definitions as defined in GB/T 3853 and GB/T 17446 apply to this document.

3.1 General definition

3.1.1

Air purification treatment

All processes for separating impurities and purifying compressed air.

3.1.2

False demand

In an unregulated or poorly regulated system, the system is redundant due to the operation of the equipment at a pressure that exceeds the actual demand.

Gas consumption.