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

GB/T 36588-2018

**Safety devices for protection against excessive pressure --
Common data**

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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 use of ISO 4126-7.2013 "Overvoltage protection safety devices Part 7. General data."

The technical differences between this standard and ISO 4126-7.2013 and their reasons are as follows.

--- Regarding the scope, this standard has been adjusted with technical differences to meet the requirements of China's technical conditions and standard structure.

The whole situation is reflected in Chapter 1, "Scope", and the specific adjustments are as follows.

* Amend the scope of Chapter 1 of ISO 4126-7.2013 to "This standard specifies the relevant performance parameters of the safety valve protection device.

General data. ";

* Adjusting the scope of Chapter 1 of ISO 4126-7.2013 "When the discharge temperature is greater than 90% of the critical temperature, the discharge pressure is greater than

At 50% critical pressure, it is not recommended to calculate the displacement using the formula specified in 6.3. In addition, the method specified in 6.3 does not apply to gas

The situation of condensation occurs in the body" to 6.3 of this standard.

---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 References", and the specific adjustments are as follows.

* Replaced ISO 4126-1 with GB/T 12241 modified to adopt international standards;

* Replace ISO 4126-4 with GB/T 28778 modified to international standards (see Chapter

3);

* ISO 4126-2 and ISO 4126-3 have been removed.

--- Removed some of the terms in Chapter 3 of ISO 4126-7.2013. Because these terms are in GB/T 12241, GB/T 28778

There are provisions in the text, and the meaning is basically the same.

--- Adjusted the ISO 4126-7.2013 Chapter 4 Table 1 symbol content is as follows.

* The symbol PS is deleted. Because this standard does not involve this symbol;

* Modified symbol Q

m is Qm because the international standards are not uniform;

* The symbol μ_0 is modified to be μ , which is consistent with other standards.

--- Removed part of the formula number in ISO 4126-7.2013. The formulas for interpreting data sources in ISO 4126-7.2013 are carried out

No. This standard deletes the type number according to the custom of our country.

--- Split ISO 4126-7. Table 2 in Table 2 is Table 2 to Table 6 of this standard. Steaming under different conditions in ISO 4126-7.2013

The steam pressure coefficient is listed in the same table. This standard is convenient for searching and conforming to the customary conditions of China.

The numbers are listed separately.

--- Adjust the suspension section of ISO 4126-7.2013 6.3 to 6.3.1 of this standard to meet the requirements of China's standard structure.

--- Removed the contents of the different gas parameters of 7.6 of ISO 4126-7.2013 because the gas parameters are standard.

--- Removed the technical requirements of different springs in Chapters 8 and 9 of ISO 4126-7.2013, because China has a corresponding spring country

This standard also made the following editorial changes.

--- Conversion of ISO 4126-7.2013 US units and calculation formulas are metric units and calculation formulas.

--- Removed Example 2 of A.1 of Appendix 4 of ISO 4126-7.2013. Because it is an example of a gaseous medium under critical flow

Displacement calculation.

This standard was proposed by the China Machinery Industry Federation.

This standard is under the jurisdiction of the National Safety Relief Device Standardization Technical Committee (SAC/TC503).

This standard was drafted. Hefei General Environmental Control Technology Co., Ltd., Shanghai Huali Safety Equipment Co., Ltd., Xuzhou Bafangan

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1 Scope

This standard specifies general data on the performance parameters of safety valve protection devices.

This standard applies to non-flash liquid and non-gas/liquid two-phase media.

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.

General requirements for GB/T 12241 safety valves (GB/T 12241-2005, ISO 4126-1.1991, MOD)

GB/T 28778 pilot operated safety valve (GB/T 28778-2012, ISO 4126-4.2004, MOD)

3 Terms and definitions

The following terms and definitions as defined in GB/T 12241 and GB/T 28778 apply to this document.

3.1

Safety valve safetyvalve

An automatic valve that utilizes the force of the medium itself to discharge a nominal amount of fluid without any external force to prevent pressure from exceeding

Rated safety value. When the pressure returns to normal, the valve closes and prevents the media from continuing to flow out.

3.2

Setting pressure setpressure

The predetermined pressure at which the safety valve begins to open under operating conditions.

Note. This pressure is the gauge pressure measured at the inlet of the valve. Under this pressure, the force generated by the pressure of the medium under the specified operating conditions causes the valve to open.

The forces that remain with the flap on the valve seat balance each other.

3.3

Overpressure overpressure

The pressure increase that exceeds the set pressure of the safety valve is usually expressed as a percentage of the set pressure.

3.4

Discharge pressure relieving pressure

The sum of the set pressure and the excess pressure.

3.5

Discharge back pressure built-up back pressure

The medium flows through the pressure formed by the safety valve and the discharge system at the valve outlet.

3.6

Additional back pressure superimposed back pressure

The static pressure present at the outlet of the safety valve immediately before its action is caused by other pressure sources in the discharge system.

3.7

Runner area flow area

The minimum cross-sectional area of the flow path from the inlet end of the valve to the sealing surface of the seat (not the smallest area between the seat and the disc) is used to calculate