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

GB/T 1576-2018

Replacing GB/T 1576-2008

Water quality for industrial boilers

工业锅炉水质

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1 Scope

GB/T 1576-2018 is the Chinese national standard on water quality for industrial boilers, in the field of energy and heat transfer engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 14 May 2018 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 December 2018. Classification: ICS 27.060.30, CCS J75. 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 water quality requirements for feed water, pot water, steam return water and make-up water during industrial boiler operation. This standard is applicable to fixed steam boilers, steam-water dual-purpose boilers with rated outlet steam pressure less than

3.8 MPa and water as medium. Hot water boiler. This standard does not apply to boilers made of aluminum.

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. Preparation of

GB/T 601 chemical reagent standard titration solution Preparation of preparations and products used in

GB/T 603 chemical reagent test method

GB/T 6682 Analytical laboratory water specifications and test methods

GB/T 6903 General rules for analysis of boiler water and cooling water

GB/T 6904 Determination of pH in industrial circulating cooling water and boiler water

GB/T 6907 boiler water and cooling water analysis method water sample collection method

GB/T 6908 Boiler water and cooling water analysis methods - Determination of conductivity

GB/T 6909 Determination of hardness of boiler water and cooling water

GB/T 6913 Determination of boiler water and cooling water - Determination of phosphate

GB/T 12145 Thermal power generation and steam power equipment water vapor quality

GB/T 12151 Determination of turbidity of water and cooling water for boilers (Fuma turbidity)

GB/T 12152 Determination of oil content in boiler water and cooling water

GB/T 12157 Determination of dissolved oxygen in industrial circulating cooling water and boiler water

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Raw water rawwater The source water of the boiler feed water.

5 Water quality analysis method

6 Appendix A (Normative) Determination of dissolved oxygen (oxygen electrode method)

10 Appendix C (Normative) Indirect determination of dissolved solids in pot water

12 Appendix D (Normative) Determination of Phosphate (Phosphorus Molybdenum Blue Colorimetric Method)

17 Appendix F (Normative) Determination of sulfite (Iodometric method) 19

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

standard replaces GB/T 1576-2008 "Industrial Boiler Water Quality". Compared with GB/T 1576-2008, except for editorial changes The technical changes are as follows:

--- Revised the definition of "raw water" and "demineralized water"; changed "backwater" to "steam boiler backwater", "added medicine in pot" to "water in pot" "" and revised the definition; added the term "natural alkalinity" (see Chapter 3, Chapter 3 of the.2008 edition);

4.1 General (see 4.1);

--- Unified the indicator value of the turbidity of the feed water; modified the pH value of the feed water and the alkalinity of the pot water; increased the conductivity index of the pot water (see Table 1, Table 1 of the.2008 edition);

--- Revised the scope and requirements for water treatment in the pot (see 4.3.1, 4.2.1 of the.2008 edition);

--- Increased the indicator of water supply iron (see Table 2);

--- Modified the dissolved oxygen index of the feed water and the lower limit of the feed water alkalinity of the direct current boiler; increased the power of the cross-flow and DC boiler feed water and pot water Conductivity indicator (see Table 3, Table 5 of the.2008 edition);

--- Increased the index of copper in the steam boiler backwater (see Table 4);

--- Removed the "oil" indicator; modified the upper limit of pH in the pot water; increased the iron, oil, phenolic alkalinity, dissolved oxygen index (see Table 5, Tables 3 and 4 of the.2008 edition);

--- Removed boiler blowdown rate control requirements for feed water quality (see 4.5.4 of the.2008 edition);

--- Water quality analysis method, the turbidity determination method was changed from the.2008 edition of Appendix A to GB/T 15893.1 method; the determination of oil was deleted. The.2008 version of Appendix C method; the total iron determination increased the GB/T 14427 method; the dissolved solids determination increased GB/T 14415 Method, newly added GB/T 13689 copper determination method; chloride determination (ammonium thiocyanate titration method) from the.2008 edition of Appendix G Changed to the GB/T 29340 method (see Chapter 5, Chapter 5 of the.2008 edition, Appendix A, Appendix C and Appendix G);

--- Revised B.4.2 of Appendix B (see B.4.2,.2008 edition of D.4.2);