

ICS 27.060

CCS F04



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

GB/T 17719-2009

Replacing GB/T 17719-1999

**Calculation method and utilization guides for waste heat
resource's quantity of industrial boiler's and flame heating
furnace's exhaust gas**

工业锅炉及火焰加热炉烟气余热资源量计算方法与利用导则

Issued on: April 8, 2009

Implemented on: December 1, 2009

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4.1.1 Calculation according to formula (1). 100 q 4 (1) Where. Qyr

Foreword

This standard replaces GB/T 17719-1999 "industrial boiler flue gas heat and flame heating furnace Resource Calculation method and utilization guidelines." This standard compared with GB/T 17719-1999 main changes are as follows:

- According to the provisions of GB/T 1028 for terminology, classification revised and improved;
- According to the requirements GB/T 10180, GB/T 17954 and so on formulas, symbols and informative annex data standards referenced in the Amendment;
- Based on waste heat "cascade utilization, with high-quality" principle, the use of waste heat 250 °C ~ 400 °C for increased encouragement for Power Generation terms [see 5.1b)];
- Supplementary principles furnace industrial boilers and waste heat utilization, proposed to provide tail heating surface and the waste heat recovery unit to Seek range (see 5.4,
- Complements the waste heat recovery and utilization management requirements (see 6.6);
- Unified calculation formula idiomatic expressions and marked [see formula (2), (3), (5), (6), using the mass fraction and volume fraction Representation];
- Standard Appendix A, Appendix B and Appendix C has been revised and complements. The Standard Appendix A, Appendix B and Appendix C are informative appendices. This standard by the National Standardization Technical Committee for Energy Management and focal points. This standard is drafted by: Hangzhou Boiler Group Co., Ltd., China National Institute of Standardization. Participated in the drafting of this standard. Zhejiang Special Equipment Inspection and Research Institute, Shanghai Institute of industrial boilers. The main drafters of this standard. Tubo Rui Xue in Thailand, Wang Zhong, solid industry Qin, Cheng Jianhong, a Defang, ECHNOLOGY leaf Mian. This standard replaces the standards previously issued as follows:
- GB/T 17719-1999. Industrial boiler flue gas furnace and flame Waste heat calculation method and utilization guides

1 Scope

GB/T 17719-2009 is the Chinese national standard on calculation method and utilization guides for waste heat resource's quantity of industrial boiler's and flame heating furnace's exhaust gas, 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 8 April 2009 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 December 2009. Classification: ICS 27.060, CCS F04. 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.

Back calculation method of waste heat and waste heat boilers and industrial resources flame furnace smoke This standard specifies, as well as waste heat resources Receive and utilize the principles of management requirements. This standard applies to GB/T 1921, boilers and GB GB/T 3166 provisions/T 3486 stipulated continuous flame heating furnace (with Planning hereinafter referred to as "furnace") of the waste heat utilization engineering, design, technological innovation and management.

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 1028 industrial waste heat terminology, classification, grade and waste heat resource calculation method

GB/T 1921 series of industrial steam boiler

GB/T 3166 series hot water boiler parameters

GB/T 3486 evaluating the rationality of thermal Technical Guidelines Boiler thermal performance test procedures GB/T 10180 Industrial

GB/T 15317 Industrial Boiler Energy Conservation Monitoring Methods

GB/T 15319 - Furnace Flame Monitoring

GB/T 17954 Industrial Boiler economy

3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 With respect to the ambient temperature is 20 °C, relative humidity of 70%, the average volume of flue gas heat capacity at constant pressure is 1.359kJ/(m³ · °C) conditions Flue gas carried by waste heat for macro control targets. NOTE. The standard "m³" refers to standard conditions (1.01325 x 10⁵Pa, 0 °C) under the measured gas volume units.

3.2 By country, industry and the relevant provisions of this standard, the technical and economic analysis to determine the available waste heat of the flue gas for the practical application of indicators.

4.1.1 Calculation according to formula (1). 100 q 4 (1) Where. Qyr

--- In flue gas waste heat, in units of kilojoules per year (kJ/a);