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Measurement and calculation method of thermal equilibrium and thermal efficiency of domestic ceramics electric-heated kiln

日用陶瓷电加热窑炉热平衡、热效率测定与计算方法

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Light Industry Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Daily-Use Ceramics (SAC/TC405).

This document was drafted by: China Light Industry Ceramics Research Institute, Foshan Delitai Technology Co., Ltd., and Guangdong Zhongpeng Thermal Energy Technology Co., Ltd.

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Thermal balance and thermal efficiency of electric heating kilns for daily ceramics Measurement and Calculation Methods

1 Scope

This document describes the methods for determining and calculating the heat balance and thermal efficiency of electric heating kilns for daily-use ceramics.

This document applies to the heat balance and thermal management of intermittent and continuous kilns that use electricity as a heat source in the production of daily-use ceramics.

Efficiency measurement and calculation.

2 Normative references

GB/T 5000

3 Terms and Definitions

The terms and definitions defined in GB/T 5000 and the following terms and definitions apply to this document.

3.1 4 Units, Symbols, and Standards

An electric heating kiln equipped with a gas burner.

Note. The electric mixing kilns mentioned in this document are limited to intermittent kilns; electric heating continuous kilns (roller kilns, tunnel kilns) are not considered for this purpose. Scene.

4.1 Conversion between calories and joules

This document specifies the use of 20°C calories, i.e., 1 calorie (20°C) = 4 1816 J.

4.2 Symbols

The symbols used in this document are listed in Appendix A.

4.3 Temperature Reference

The temperature reference in this document is 0°C.

4.4 Material Standard

The material mass standard in this document is 1 kg (product).