

ICS 25.180.10

CCS K61



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

GB/T 10067.416-2019

**Basic specifications for electroheating and electromagnetic
processing installations - Part 416: Polysilicon ingot furnace**

电热和电磁处理装置基本技术条件 第416部分:多晶硅铸锭炉

Issued on: August 30, 2019

Implemented on: March 1, 2020

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Product Classification	2
5 Technical requirements	2
6 Test method	6
7 Inspection rules	7
8 Marking, packaging, transportation and storage	8
9 Ordering and delivery	8

Foreword

GB/T 10067 "Basic Technical Conditions for Electrothermal and Electromagnetic Treatment Devices" is divided into the following sections.

- Part 1. General part;
- Part 2. Arc heating device;
- Part 21. Large AC arc furnace;
- Part 3. Induction heating device;
- Part 31. Intermediate frequency centerless induction furnace;
- Part 32. Voltage type frequency conversion multiple intermediate frequency centerless induction furnace complete sets;
- Part 33. Power frequency centerless induction melting copper furnace;
- Part 34. Transistor type high frequency induction heating device;
- Part 35. Intermediate frequency vacuum induction melting furnace;
- Part 4. Indirect resistance furnace;
- Part 41. Mesh belt type resistance heating unit;
- Part 42. Push-type resistance heating unit;
- Part 43. Forced convection well type resistance furnace;

1 Scope

GB/T 10067.416-2019 is the Chinese national standard on basic specifications for electroheating and electromagnetic processing installations - part 416: polysilicon ingot furnace, in the field of manufacturing 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 30 August 2019 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2020.

Classification: ICS 25.180.10, CCS K61. 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 part of GB/T 10067 specifies the terms and definitions, product classification and technical requirements of polycrystalline silicon ingot furnace (hereinafter referred to as polycrystalline furnace). Requirements, test methods, inspection rules, marking, packaging, transportation and storage, and ordering and delivery. This section applies to polycrystalline furnaces for directional solidification of solar grade polycrystalline silicon ingots.

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 150-2011 (all parts) pressure vessel

GB/T 2900.23-2008 Electrotechnical terminology industrial electric heating device

GB 3095-2012 Ambient Air Quality Standard

GB/T 5959.1-2019 Safety of electrothermal and electromagnetic treatment systems - Part 1. General requirements

GB 8978-1996 Integrated Wastewater Discharge Standard

GB/T 10066.1-2019 Test methods for electrothermal and electromagnetic treatment systems - Part 1. General part

GB/T 10066.4-2004 Test methods for electric heating equipment - Part 4. Indirect resistance furnace

GB/T 10067.1-2019 Basic technical requirements for electrothermal and electromagnetic treatment systems - Part 1. General part

GB/T 10067.4-2005 Basic technical requirements for electric heating devices - Part 4.

Indirect resistance furnace

GB 12348-2008 Environmental noise emission standards for industrial enterprises

GB 16297-1996 Integrated emission standards for atmospheric pollutants

JB/T 9691-1999 Electric heating equipment product model preparation method

3 Terms and definitions

The following terms and definitions as defined in GB/T 2900.23-2008 and GB/T 10066.4-2004 apply to this document.

3.1 Polycrystalline furnace polysiliconing furnace An industrial electric heating device for solar grade polycrystalline silicon ingots is produced by polysilicon directional solidification technology.

3.2 Studio size dimensionsofworkingchamber The space size of the crystal growth chamber specified in the design of the polycrystalline furnace and indicated on the drawing.

Note. The size of the studio is indicated by the inner diameter and height.

3.3 Melt amount charge The maximum charge per furnace is specified in the design of the polycrystalline furnace.