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**GB**

**NATIONAL STANDARD**

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

**中华人民共和国国家标准**

**GB/T 1348-2009**

**Replace GB/T 1348-1988**

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**Spheroidal Graphite Iron Castings**

**球墨铸铁件**

(ISO 1083:2004, Sphheroidal graphite cast irons - Classification, MOD)

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## Foreword

This national standard is modified in relation to ISO1083:2004" Spheroidal graphite cast irons".

The main technical differences between the national standard and the international standard adopted:

——The structure is largely revised. The same table note and technical requirements in ISO1083: 2004 are deleted.

——Requirements for the appearance quality of the cast, relevant detection method, sampling batch program and test rules, other testing items for the cast, sign, certification of quality, antirust requirements for cast, packing requirement for cast and storage and transportation requirement for cast are added. These contents are indispensable in foundry practice and test. However, ISO1083: 2004 does not contain those contents. This supplements these contents and the adaptability of the standard is lifted.

——7.5~7.10 is added.

——8.6 is added.

——all the contents in chapter 11, chapter12 and chapter 13 are supplemented.

Relative clauses in the overseas advanced standards like ASTM A536-2004"Standard Specification for Ductile Iron Castings "and JIS G5502"Spheroidal graphite iron castings" are served as a reference in this standard.

This standard replaces GB/T 1348-1988"Spheroidal graphite iron castings". The major technical differences between GB/T1348-1988 and this standard:

——Trademark of spheroidal-graphite cast iron is supplemented.

——Low-temperature impact performance index of the Spheroidal-graphite cast iron is supplemented;

——Specifications of the test lug and specimen are supplemented.

——Requirements for the sampling batch are supplemented.

——Appendix A Spheroidal-graphite cast iron QT500-10 technical specification is supplemented.

——Appendix B elongation percentage difference specifications is supplemented.

——Appendix D Spheroidal-graphite cast iron ductile informative Appendix is supplemented;

——Appendix E cast main body yield strength value is supplemented;

——Appendix F Spheroidal-graphite cast iron modularity informative Appendix is added;

——Appendix G Spheroidal-graphite cast iron rigidity and strength of extension graph of relation is supplemented;

——Spheroidal-graphite cast iron physical property is added;

Appendix A, Appendix B, Appendix C, Appendix D, Appendix E and Appendix F of this standard are informative appendices.

This national standard is under the jurisdiction of national foundry technical committee for standardization.

This national standard was drafted by Shenyang foundry institute, Zhongtian Chunagzhan Ductile Iron Co., Ltd. in Sunde district of Foshan.

This national standard was drafted by the participation of Wuxi FAW foundry co., Ltd, Hefei JAC foundry Co., Ltd. Anhei Shenjian science and technology Co., Ltd., Ningbo Riyue foundry group company and Anhui machinery science institute.

This standard is drafted by Song Liang, Chen Yongchen, Yu Xuru, Zhang Yan, Ye Tianhan, Pei Bing, Song Xianfa.

Distribution condition for all previous edition of this Standard is:

——GB/T 1348-1978, GB/T 1348-1988.

*NOTE: The English version hereof has been translated directly from the openly-published Chinese standard GB/T 1348-2009. In the event of any discrepancy in the process of implementation, the Chinese version shall prevail.*

# Spheroidal Graphite Iron Castings

## 1 Scope

This national standard specifies the terms and definitions, trademark, technical requirements, testing and sampling method, test rules, other testing method of the cast, mark, packaging, rust protection and storage requirements of the spheroidal graphite iron castings.

This standard is applicable to sand mould alloying pellet nodular cast iron pieces and the casting mould with similar sand mould.

As for spheroidal graphite iron castings made in the special type casting method, this standard can be served as the reference.

## 2 Normative References

The following normative documents contain provision which, through reference in this text, constitute provisions of this national standard. For dated reference, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the normative document referred to applies.

GB/T 223.3 Methods for chemical analysis of iron, steel and alloy - The diantipyrylmethane phosphomolybdate gravimetric method for the determination of phosphorus content

GB/T223.4 Alloyed steel - Determination of manganese content - Potentiometric or visual titration method

GB/T 223.60 Methods for chemical analysis of iron, steel and alloy - The perchloric acid dehydration gravimetric method for the determination of silicon content

GB/T 228 Metallic Materials - Tensile Testing at Ambient Temperature (GB/T228 - 2002, eqv ISO 6892:1998)

GB/T 229 Metallic materials—Charpy pendulum impact test method (GB/T229-2007, iso148- 1:2006, MOD)

GB/T 231.1 Metallic materials--Brinell hardness test - Part 1: Test method (GB/T231.1- 2002, eqv ISO 6506 1:1999)

GB/T 231.2 Metallic Brinell hardness test - Part 2: Verification and calibration of hardness testers (GB/T231.2- 2002, ISO 6506- 2:1999 MOD)

GB/T 231.3 Metallic Brinell hardness test - Part 3: Calibration of hardness reference blocks (GB/T231.3- 2002, ISO 6506- 3:1999, MOD)

GB/T 4336 Standard test method for spark discharge atomic emission spectrometric analysis of carbon and low-Alloy steel (routine method)

GB/T 5611 Foundry terminology

GB/T 5612 Code for representing cast iron (GB/T5612- 2008, ISO15931:2004, MOD)

GB/T 5677 Radiographic testing for steel castings (GB/T5677-2007, ISO4993:1987, IDT)

GB/T 6060.1 Roughness comparison specimens Cast surfaces (GB/T6060.1-1997, eqv ISO32- 3:1979)

GB/T 6414 Castings - System of dimensional tolerances and machining allowances (GB/T6414 - 1999, eqv ISO 8062:1994)



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