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

GB/T 7702.9-2008

**Test method for granular activated carbon from coal --
Determination of ignition temperature
(English Translation)**

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Foreword

GB/T 7702 "Test Method for Granular Activated Carbon from Coal" is divided into.

- Part 1.Determination of Moisture;
- Part 2.Determination of Particle Size;
- Part 3.Determination of Hardness;
- Part 4.Determination of Packing Density;
- Part5.Determination of Absorption of Water;
- Part 6.Determination of Methylene Blue Absorption;
- Part 7.Determination of Iodine Number;
- Part 8.Determination of Phenol Absorption;
- Part 9.Determination of Ignition Temperature;
- Part 10.Determination of Service Life against Benzene and Chloroethane Vapours;
- Part 13.Determination of CCL4 Vapour Absorption;
- Part14.Determination of Sulphur Capacity;

- Part 15.Determination of Ash Content;
- Part 16.Determination of pH Value;
- Part 17.Determination of Floatation Ratio;
- Part 18.Determination of Caramel Absorption;
- Part 19.Determination of Carbon Tetrachloride (CCl₄) Desorption;
- Part 20.Determination of Pore Volume and Specific Surface Area.

This Part is part 9 of GB/T 7702.

This Part replaces GB/T 7702.9-1997 Standard test method for ignition temperature of granular activated carbon from coal.

This Part modifies and adopts U.S. ASTM D 3466.2006 Standard Test Method for Ignition Temperature of Granular Activated Carbon. Following changes have been made in this Part.

- a) Change the temperature measuring point into 2 temperature measuring points;
- b) Change the accuracy into that the difference between two parallel results shall not be more than 20°C.

Compared with GB/T 7702.9-1997, the main changes of this Part are as follows.

- a) Add the test condition; and specify the air source for test use;
- b) Stipulate that the carbon layer shall be covered with the quartz beads with the thickness of 15 mm and diameter of 3 mm, in order to prevent fluidization of the carbon layer;
- c) Revise the schematic diagram of quartz ignition tube; and specify the specification and size of the quartz ignition tube.
- d) Added Chapter 3 "Terms and definitions".

This Standard was proposed by China North Industries Group.

The drafting organization of this Standard. Shanxi Xinhua Chemical Co., Ltd.

The chief drafting staffs of this Standard. Cheng Qingjun, Yuan Yidong, Zhang Xu, Zhao Jijun, Li Weibing, Qiao Xueming, and Chi Guangxiu.

This Standard was first-time issued in 1987, and revised in 1997 for the first revision.

Test Method for Granular Activated Carbon from Coal -
Determination of Ignition Temperature

1 Scope

This Part specifies the content such as principle, steps and result calculation for the determination of ignition temperature of granular activated carbon from coal.

This Part applies to the determination of ignition temperature of granular activated carbon from coal.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Part of GB/T 7702. For dated reference, the subsequent amendments (excluding correction) or revisions of these publications do not apply. However, the parties who enter into agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards. For undated references, the latest edition of the normative document referred to applies.

GB/T 7702.2 Standard Test Method for Granular Activated Carbon from Coal -
Determination of Particle Size

3 Terms and definitions

For the purpose of this Part of GB/T 7702, the following terms and definitions shall apply.

3.1

Ignition temperature

The instantaneous temperature of the activated carbon which gradually rises along the temperature of heating air flow until the carbon catches fire suddenly, under the test conditions specified.

4 Principle

Heat the specimen in the air flow according to certain temperature-rise rate; along the temperature rises, the specimen temperature suddenly rises and exceeds the

f) Test personnel;

g) Date of test.

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