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

**GB/T 20255.6-2008**

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**Methods for chemical analysis of hard metals -- Flame atomic  
absorption spectrometry -- General requirements**

硬质合金化学分析方法 火焰原子吸收光谱法 一般要求

**(English Translation)**

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### Foreword

GB/T 20255 "Methods for chemical analysis Carbide" is divided into 6 sections.

GB/T 20255.1 Carbide chemical analysis of calcium, potassium, magnesium and sodium contents - Flame atomic absorption spectrometry;

GB/T 20255.2 Carbide chemical analysis of cobalt, iron, manganese and nickel content by flame atomic absorption spectrometry;

GB/T 20255.3 Carbide chemical analysis of molybdenum, titanium and vanadium content - Flame atomic absorption spectrometry;

Flame atomic GB/T 20255.4 Carbide chemical analysis of cobalt, iron, manganese, molybdenum, nickel, titanium and vanadium amount of light absorbed Spectroscopy;

Flame atomic GB/T 20255.5 amount of chromium carbide absorption spectrometry;

GB/T 20255.6 Carbide chemical analysis by flame atomic absorption spectrometry - General requirements.

Part is divided into 6 sections.

This part identical with ISO 7627/1. 1983 "--- Carbide Chemical analysis by flame atomic absorption spectrometry --- Part 1. a General requirements. " For ease of use, this section made the following editorial changes.

a) with "this Part" instead of "this International Standard";

." B) use a decimal point instead of a decimal point in the international standard, "";

c) Remove the cover of the international standards, foreword.

This part is proposed by the China Nonferrous Metals Industry Association.

The non-ferrous metal part by the National Standardization Technical Committee.

This section Zhuzhou Cemented Carbide Group Co., Ltd., China Nonferrous Metals Industry Institute of Standards Metrology and Quality is responsible for drafting.

## 1 Scope

This section provides general requirements for flame atomic absorption spectrometry Carbide chemical analysis.

Each of the criteria listed in a part table defines the method for determining the content of the following elements by flame atomic absorption spectrometry.

Calcium, cobalt, chromium, iron, potassium, magnesium, manganese, molybdenum, sodium, nickel, titanium, vanadium.

## 2 Scope

This method is applicable to the following ranges.

- a) chromium, niobium, tantalum, titanium, tungsten, vanadium carbide;
- b) a mixture of the carbide metal bonding;
- c) Using the above-described various types of pre-sintered carbide production or sintered carbide;
- d) after complete removal of the coating containing coated carbide elements listed in Table 1.

Table 1 GB/T 20255 and each element of each part number and scope of the appropriate section contains

No part of the respective range of elements (mass fraction) /% GB/T 20255.1 Ca, K, Mg, Na 0.001 ~ 0.02 GB/T 20255.2 Co, Fe, Mn, Ni 0.01 ~ 0.5 GB/T 20255.3 Mo, Ti, V 0.01 ~ 0.5 GB/T 20255.4 Co, Fe, Mn, Mo, Ni, Ti, V 0.5 ~ 2 GB/T 20255.5 Cr 0.01 ~ 2 Note. The method can also be used chromium content range (mass fraction) was measured at 0.01% to 2% of iron, nickel, cobalt and manganese.

### Principle 3

Sample dissolution and flame atomic absorption spectrometry.

## 4 Interfering elements

Using a similar matrix in the test solution and standard solution to minimize the influence of interference.

## 5 Reagents

Use only analytical reagent and double distilled water or equivalent purity water analysis.

**Note:** The purity reagents required under certain circumstances.

## 6 Instruments

Conventional laboratory equipment and atomic absorption spectrometer.

**NOTE:** All the instrument parameters should be selected so that the best instrument sensitivity. Proposed that a single element hollow cathode lamp. See recommended equipment requirements GB/T 20255.1 - 20255.5 of the corresponding portion.

GB/T 20255.6-2008/ISO 7627/1. 1983