

ICS 77.120.20

CCS H12



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

GB/T 13748.21-2009

**Chemical analysis methods of magnesium and magnesium
alloys - Part 21: Determination of elements by photoelectric
direct reading atomic emission spectrometry**

**镁及镁合金化学分析方法 第21部分：光电直读原子发射光谱分析方法测定元素含
量**

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Table of Contents

Foreword

1 Scope

About this edition

Classification and status

How a Chinese national standard is set out

Foreword

This document was issued on 15 April 2009 by the State Administration for Market Regulation and the Standardization Administration of the People's Republic of China, and has been in force since 1 February 2010.

It is the first edition of this standard.

Classification: ICS 77.120.20, CCS H12.

1 Scope

Part 21 of China's national series on the chemical analysis of magnesium and magnesium alloys, determining the elements by photoelectric direct reading atomic emission spectrometry. This is optical emission on a solid sample: a spark is struck against the metal, the light is dispersed, and the intensity at each element's wavelength is read directly. The whole analysis takes under a minute and reports every element at once, which is why it is what a foundry actually uses - a melt cannot be held while a wet chemical analysis runs, and the composition has to be confirmed and corrected before the metal is poured. For magnesium the speed matters more than for most alloys, because the impurities that destroy its corrosion resistance - iron, nickel and copper - do so at a few hundredths of a per cent, so the melt has to be checked and treated rather than discovered wrong afterwards.

About this edition

GB/T 13748.21-2009 is the first edition of this standard. It was issued on 15 April 2009 and has been in force since 1 February 2010.

There is no earlier edition to compare it with, so a specification that has to refer to this subject can only cite GB/T 13748.21-2009 itself.

The interval between issue and effect is the transition period. It exists so that producers,

laboratories and buyers can requalify products, revise procedures and use up documentation before the new text becomes the one that applies. The date on this page is the official one from the record of the Standardization Administration.

Classification and status

GB/T 13748.21-2009 is classified under ICS 77.120.20, in the field of metallurgy. ICS is the International Classification for Standards, the same scheme used by ISO and by the national bodies of most countries, which is what allows a Chinese standard to be placed beside its foreign counterparts on subject rather than on number.

Its Chinese Standard Classification code is CCS H12. CCS is the domestic scheme, a letter for the sector and two digits for the subject within it, and it is the code by which the standard is filed and searched in China.

The GB/T prefix marks a recommended national standard. It is not, in itself, law: it becomes binding when a contract names it, when a regulation or a mandatory standard refers to it, or when a producer declares conformity with it. In practice that covers most of the cases in which it will be read - a purchase specification, an inspection agreement or a certification scheme.

How a Chinese national standard is set out

Chinese national standards are drafted to the rules of GB/T 1.1, which fixes the order in which a standard is set out. The document opens with a foreword recording the issuing bodies, the relationship to any previous edition and the technical committee responsible for it. Clause 1 is the scope. Clause 2 lists the normative references - the other standards that have to be applied together with this one, and without which its requirements cannot be met. Clause 3 gives the terms and definitions. The technical clauses follow: the requirements themselves, the test or measurement methods by which conformity is established, the inspection rules that say how a lot is sampled and judged, and, for a product standard, the provisions on marking, packaging, transport and storage. Annexes, normative or informative, come last.

GB/T 13748.21-2009 runs to 8 pages in the English translation. What is delivered is the complete document in that order: every clause, every table, every figure and every annex of the Chinese original, with the same numbering, so that a reference to a clause number in a contract or a test report points to the same place in both languages.