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(JISF)

Iron and steel—ICP atomic emission spectrometric method—Part 8: Determination of tungsten content—Decomposition with phosphoric and sulfuric acids

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal for establishment of Japanese Industrial Standard submitted by The Japan Iron and Steel Federation (JISF) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

JIS G 1258 series consists of the following 9 parts under the general title "*Iron and steel—ICP atomic emission spectrometric method*":

Part 0: General rules

Part 1: Determination of various elements—Decomposition with acids and fusion with potassium disulfate

Part 2: Determination of various elements—Decomposition with phosphoric and sulfuric acids

Part 3: Determination of various elements—Decomposition with acids and fusion with sodium carbonate

Part 4: Determination of niobium content—Dissolution in phosphoric and sulfuric acids or Dissolution in acids and fusion with potassium disulfate

Part 5: Determination of boron content—Dissolution in phosphoric and sulfuric acids

Part 6: Determination of boron content—Dissolution in acids and fusion with sodium carbonate

Part 7: Determination of boron content—Distillation as trimethyl borate

Part 8: Determination of tungsten content—Decomposition with phosphoric and sulfuric acids

Iron and steel—ICP atomic emission spectrometric method—Part 8: Determination of tungsten content—Decomposition with phosphoric and sulfuric acids

Introduction

This Japanese Industrial Standard has been prepared to correspond to the expansion of determination range of tungsten specified in **JIS G 1258-2** which was revised in 2014.

No corresponding International Standard has been established at this point.

1 Scope

This Standard specifies decomposition with phosphoric and sulfuric acids among determinations of tungsten in steel using ICP atomic emission spectrometric method. This method is applicable to determination of tungsten content rate (mass fraction) of 10.0 % or over to and including 20.0 % in steel. However, it is not applicable to steels containing one or more coexisting components with content rate [mass fraction (%)] over the upper limits specified in Table 1.

Table 1 Upper limit of content rate of coexisting component

Coexisting component	Upper limit of content rate [mass fraction (%)]
Manganese	20.0
Nickel	30.0
Chromium	35.0
Molybdenum	10.0
Copper	5.0
Vanadium	6.0
Cobalt	20.0
Titanium	3.0
Niobium	5.0
Calcium	0.005
Magnesium	0.011
Arsenic	0.012
Zirconium	0.060