JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 1212-1 : 2023

(JISF)

Iron and steel — Determination of silicon — Part 1: Gravimetric method as silicon dioxide

ICS 77.080.01

Reference number : JIS G 1212-1 : 2023 (E)

Date of Establishment: 2023-12-20

Developed by: The Japan Iron and Steel Federation

Investigated by: The Japan Iron and Steel Federation,
Standardization Center

JIS G 1212-1 : 2023, First English edition published in 2025-03

Translated and published by: Japanese Standards Association
Mita Avanti, 3-11-28, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

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

Printed in Japan SW

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Foreword

This Japanese Industrial Standard has been established by the Minister of Economy, Trade and Industry based on the provision of Article 14, paragraph (1) of the Industrial Standardization Act in response to a proposal for establishment of Japanese Industrial Standard with a draft being attached, submitted by The Japan Iron and Steel Federation (JISF), an accredited standards development organization. This Standard partially replaces **JIS G 1212** : 1997, which has been withdrawn.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, published patent application or utility model rights. The relevant Minister is not responsible for identifying any of such patent rights, published patent application or utility model rights.

JIS G 1212 series consists of the following 3 parts under the general title *Iron and steel — Determination of silicon —* :

Part 1 : Gravimetric method as silicon dioxide

Part 2 : Ammonium iron (II) sulfate reduced molybdosilicate spectrophotometric method

Part 3 : Ascorbic acid reduced molybdosilicate spectrophotometric method

Iron and steel — Determination of silicon — Part 1: Gravimetric method as silicon dioxide

Introduction

This Japanese Industrial Standard has been prepared based on ISO 439 : 2020, Edition 3, with some modifications of the technical contents.

Part of the requirements specified in the main body of the corresponding International Standard is moved and specified as Annex A in this Standard. The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanations is given in Annex JA.

1. Scope

This Standard specifies a gravimetric method for the determination of the silicon in iron and steel as silicon dioxide.

This method is applicable to the determination of silicon whose content is 0.1 % or over up to and including 8 % in mass fraction.

NOTE 1 Table 1 shows the determination ranges specified in respective standards of JIS G 1212 series.

Table 1 Determination ranges specified in standards of JIS G 1212 series

Standard No.	Determination range [mass fraction (%)]
JIS G 1212-1	0.1 or over up to and incl. 8
JIS G 1212-2	0.01 or over up to and incl. 1
JIS G 1212-3	0.01 or over up to and incl. 1

NOTE 2 The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 439 : 2020 *Steel and cast iron — Determination of silicon content — Gravimetric method* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to ISO/IEC Guide 21-1.

NOTE 3 The corresponding International Standard applies to the determination of silicon whose content is 0.10 % or over up to and including 5.0 % in mass fraction (refer to A.1).

2. Normative references

Part or all of the provisions of the following standards, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards