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**Iron and steel — Determination of sulfur
— Part 4: Infrared absorption method
after combustion in an induction furnace**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision 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 applicable to the case of revision by the provision of Article 14.

Consequently JIS G 1215-4:2017 is replaced with this Standard.

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JIS G 1215 series consists of the following 4 parts under the general title *Iron and steel — Determination of sulfur content* :

Part 1 : Gravimetric method after separation of iron

Part 2 : Gravimetric method after chromatographic separation

Part 3 : Methylene blue spectrophotometric method after separation of hydrosulfide

Part 4 : Infrared absorption method after combustion in an induction furnace

Iron and steel — Determination of sulfur —

Part 4 : Infrared absorption method after combustion in an induction furnace

Introduction

This Japanese Industrial Standard has been prepared based on ISO 4935 : 1989 (Edition 1), ISO 13902 : 1997 (Edition 1) and ISO 15350 : 2000 (Edition 1) with some modifications of the technical contents.

The portions given sidelines or dotted underlines are the matters in which the contents of the original International Standards have been modified. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the infrared absorption method after combustion in a high frequency induction furnace for the determination of sulfur content in iron and steel. This method is applicable to the determination of sulfur content rate (mass fraction) of 0.002 % or over to and including 0.35 % in pig iron and cast iron, and the determination of sulfur content rate (mass fraction) of 0.000 5 % or over up to and including 0.50 % in steel.

However, it is applicable to the determination of sulfur content rate (mass fraction) of 0.002 % or over up to and including 0.10 % in iron and steel in the case of preparing the calibration curve using the sulfur reference solution, to the determination of sulfur content rate (mass fraction) of 0.10 % or over up to and including 0.35 % in iron and steel in the case of preparing the calibration curve using barium sulfate, or the determination of sulfur content rate (mass fraction) of 0.003 0 % or over up to and including 0.20 % in pig iron and cast iron and the determination of sulfur content rate (mass fraction) of 0.000 5 % or over up to and including 0.50 % in steel in the case of preparing the calibration curve using steel and iron certified reference material.

NOTE 1 The determination range in JIS G 1215 series is shown in Table 1.

Table 1 Determination range in JIS G 1215 series

Standard No.	Determination range [mass fraction (%)]
JIS G 1215-1	0.005 or over up to and incl. 0.50
JIS G 1215-2	0.003 or over up to and incl. 0.35
JIS G 1215-3	0.000 3 or over up to and incl. 0.010
JIS G 1215-4	0.000 5 or over up to and incl. 0.50

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