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STANDARD

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(JISF)

**Iron and steel—Determination of
carbon content—Part 4: Infrared
absorption method after combustion
in a furnace with preheating or peak
separating**

ICS 77.040.30;77.080.01

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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.

Consequently, **JIS G 1211:1995** has been withdrawn and partially replaced with this Standard.

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

JIS G 1211 series consists of the following 5 parts under the general title “*Iron and steel—Determination of carbon content*”:

Part 1: Combustion gravimetric method

Part 2: Gas volumetric method after combustion

Part 3: Infrared absorption method after combustion

Part 4: Infrared absorption method after combustion in a furnace with preheating or peak separating

Part 5: Determination of non-combined carbon

Iron and steel—Determination of carbon content—Part 4: Infrared absorption method after combustion in a furnace with preheating or peak separating

Introduction

This Japanese Industrial Standard has been prepared so that, concerning Annex 5 of **JIS G 1211**: 1995, the determination method is specified over again so as to be the removal of carbon adhered and adsorbed on surface—combustion—infrared absorption method, and the tolerance calculation formula is reviewed.

The specification in this Standard had been proposed onto **ISO/TC17** (Steel and iron)/**SC1** (Methods of determination of chemical composition). Among the determination methods, the preheating—high frequency induction heating combustion method was published as the first edition of **ISO 15349-2** in 1999; however the waveform separating and preheating—electric resistance furnace heating combustion method was not adopted as **ISO** Standard and limited to the publish of Technical Report because of the insufficiency of laboratories participating in the international cooperative experiment. Consequently, the relation between this Standard and **ISO** Standard becomes MOD where **ISO 15349-2** only is the corresponding International Standard.

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

1 Scope

This Standard specifies the removal of carbon adhered and adsorbed on surface—combustion—infrared absorption method among the determination methods of carbon content of iron and steel. This method is applicable to the determination of carbon content (mass fraction) in iron and steel in the range of 0.000 3 % or over to and including 0.010 %.

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

ISO 15349-2:1999 *Unalloyed steel—Determination of low carbon content—Part 2: Infrared absorption method after combustion in an induction furnace (with preheating)* (MOD)

The 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**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.