

# JIS

JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

JIS G 1228 : 1997

## Iron and steel — Methods for determination of nitrogen content

JIS G 1228:1997 has been revised under date of February 20, 2006. The revised items are included in Amendment 1.

---

ICS 77.080.01

**Descriptors** : iron, transition metals, steels, nitrogen, determination of content, chemical analysis and testing

**Reference number** : JIS G 1228 : 1997 (E)

## Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law. Consequently **JIS G 1228 : 1994** is replaced with **JIS G 1228 : 1998**.

In this revision, ISO Standard is adopted as Annex 5, to work for compliance with International Standards.

Date of Establishment: 1954-05-22

Date of Revision: 1997-08-20

Date of Public Notice in Official Gazette: 1997-08-20

Investigated by: Japanese Industrial Standards Committee

Divisional Council on Iron and Steel

---

JIS G 1228:1997, Second English edition published in 2003-09

Translated and published by: Japanese Standards Association  
4-1-24, Akasaka, Minato-ku, Tokyo, 107-8440 JAPAN

---

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

© JSA 1999

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

## Iron and steel — Methods for determination of nitrogen content

**Introduction** This Japanese Industrial Standard has been prepared by adopting **ISO 10702 Steel and iron—Determination of nitrogen content—Titrimetric method after distillation**, issued in 1993 as Annex 1 and adopting **ISO/DIS 10720 Steel and iron—Determination of nitrogen content—Thermal conductimetric method after fusion in a current of inert gas** issued in 1996 as Annex 5, without changing technical contents. Provisions which are not specified in the corresponding International Standards are added as Japanese Industrial Standard.

The "Informative references" with underlines in this Standard are items which do not exist in the original International Standards.

**1 Scope** This Japanese Industrial Standard specifies the methods for determination of nitrogen in iron and steel.

**2 Normative reference** The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard. The most recent edition of the standards indicated below shall be applied.

JIS G 1201 *General rules for chemical analysis of iron and steel*

JIS K 8001 *General rule for test methods of reagents*

JIS Z 8402 *General rules for permissible tolerance of chemical analyses and physical tests*

**3 General matters** General matters common to the determination methods shall be in accordance with **JIS G 1201**. However, **JIS G 1201** shall not apply to Annex 1 and Annex 5.

**4 Classification of determination methods** The method for determination of nitrogen shall be as specified in one of the following methods.

- a) **Ammonia distillation separation amide sulfate titrimetric method (ISO 10702)** (Titrimetric method after distillation) This method shall be applied to the sample of 0.002% (*m/m*) or over up to and incl. 0.50% (*m/m*) nitrogen content, and its determination method shall be as specified in Annex 1. However, this method can not be applied to the sample containing silicon nitride.
- b) **Ammonia distillation separation bis(1-phenyl-3-methyl-5-pyrazolone) (abbreviation: bispyrazolone) absorptiometry** This method shall be applied to the sample of 0.000 5% (*m/m*) or over up to and incl. 0.020% (*m/m*) nitrogen content, and its determination method shall be as specified in Annex 2. However, this method can not be applied to the sample containing silicon nitride.
- c) **Ammonia distillation separation indophenol blue absorptiometry** This method shall be applied to the sample of 0.000 5% (*m/m*) or over up to and incl. 0.050% (*m/m*), and its determination method shall be as specified in Annex 3. However, this method can not be applied to the sample containing silicon nitride.