

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 0431 : 2009

(JISF)

**Steel products— Employer's
qualification system for
non-destructive testing (NDT)
personnel**

ICS 03.100.30; 23.040.10; 77.040.20; 77.140.01

Reference number : JIS G 0431 : 2009 (E)

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Date of Establishment: 2001-04-20

Date of Revision: 2009-11-20

Date of Public Notice in Official Gazette: 2009-11-20

Investigated by: Japanese Industrial Standards Committee
Standards Board
Technical Committee on Iron and Steel

JIS G 0431 : 2009, First English edition published in 2010-03

Translated and published by: Japanese Standards Association
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Printed in Japan

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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 0431:2001** is replaced with this Standard.

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Steel products—Employer's qualification system for non-destructive testing (NDT) personnel

Introduction

This Japanese Industrial Standard has been prepared based on **ISO/FDIS 11484.2** published in **2008** with some modifications of the technical contents.

The portions given 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

1.1 Application and type of steel products

This Standard specifies an employer's qualification system of the steel manufacturer for the non-destructive testing (hereafter referred to as "NDT") personnel who executes the inspection of the following steel products.

- a) Tubes
- b) Steel sheets, steel strips, rails, bars, sections, rods and wires

1.2 NDT level

This Standard describes the qualification requirements for Level 1 and Level 2 of NDT personnel who carries out the specific NDT tasks of steel products.

1.3 NDT method

This Standard shall apply to NDT personnel who predominantly executes the automated inspection of steel products by using any of the following NDT methods.

- a) Eddy current testing (ET)
- b) Flux leakage testing (FT)
- c) Liquid penetrant testing (PT)
- d) Magnetic particle testing (MT)
- e) Radiographic testing (RT)
- f) Ultrasonic testing (UT)

NOTE 1 In **ISO/FDIS 11484.2**, Visual inspection testing (VT) and Leak testing (LT) are included.

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

ISO/FDIS 11484.2:2008 *Steel products—Employer's qualification system for non-destructive testing (NDT) personnel* (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**.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitutes provisions of this Standard. The most recent edition of the standard (including amendments) indicated below shall be applied.

JIS Z 2305 Non-destructive testing— Qualification and certification of personnel

3 Terms and definitions

For the purposes of this Standard?the following terms and definitions shall apply.

3.1 qualification

to qualify the candidate through the examination administered by the authorized organization or the certification body which assesses the general, specific and practical knowledge?and the skill thereof (see **ISO 9712 :2005**)

NOTE : ISO 9712 :2005 Non-destructive testing — Qualification and certification of personnel

3.2 qualifying body

body or department independent from that of production authorized by the employer to undertake the preparation and administration of examinations

The qualifying body may also be an external organization operating under the mandate of the employer.

3.3 employer

organization for which the candidate works on a regular basis

3.4 candidate

individual seeking qualification

3.5 set-up

mechanical and/or electronic adjustment of NDT equipment to establish the testing parameters and testing sensitivity required by the product specification

3.6 NDT method

discipline applying a physical principle in NDT (see **ISO 9712 :2005**)

Example : Ultrasonic testing

3.7 NDT technique

specific way of utilizing an NDT method (see **ISO 9712 :2005**)

Example : Immersion ultrasonic testing

3.8 capability

ability and/or skill to execute a specific NDT task

3.9 competence

product knowledge and capability to carry out a specific NDT task

3.10 Level 3 individual

person who is authorized by the qualifying body to conduct, supervise and grade the qualification examination as well as certified to Level 3 of **JIS Z 2305** or equivalent for the specific NDT method and product

3.11 general examination

written examination executed on the candidate for NDT Level 1 and NDT Level 2 concerned with the principles of NDT method (see **ISO 9712 :2005**)

3.12 significant interruption

absence that prevents the qualified individual from practicing the duties corresponding to the level in the relevant NDT method for a continuous period in excess of one year or a number of periods for a total time exceeding two years

3.13 specific examination

written examination executed on the candidate for NDT Level 1 and NDT Level 2 concerned with NDT techniques applied to the particular sector including knowledge of the products tested, and of codes, standards, specifications, procedures and acceptance criteria (see **ISO 9712 :2005**)

4 General

General matters shall be as follows.

- a) Under the requirements of this Standard, the employer has sole responsibility for providing a declaration of competence that a personnel in its employ conducting NDT tasks has a prerequisite qualification and has successfully passed the qualification examinations conducted under the auspices of the employer in one or more of the NDT methods of NDT Level 1 and NDT Level 2 covered by this Standard. A certified Level 3 individual, either in the regular employ of or engaged by the employer, has the responsibility for administering the qualification examinations of NDT Level 1 and NDT Level 2.
- b) The prerequisite qualification requirements in terms of visual acuity, basic education and training shall be fulfilled by each candidate for eligibility for the qualification examinations. These prerequisite requirements shall be verified by the employer and endorsed on the qualification record.
- c) The qualification examination for NDT Level 1 and NDT Level 2 shall consist of three parts: a written general examination, a written specific examination and a practical examination.
- d) The general, specific and practical examinations of the qualification examination shall be conducted either by the employer's qualifying body or by the employer's authorized/approved external qualifying body at the employer's discretion.