

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS Z 2320-3 : 2017

(JSNDI/JSA)

**Non-destructive testing—Magnetic
particle testing—Part 3: Equipment**

ICS 19.100

Reference number : **JIS Z 2320-3 : 2017 (E)**

Date of Establishment: 2007-11-20

Date of Revision: 2017-03-21

Date of Public Notice in Official Gazette: 2017-03-21

Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area
Technical Committee on Safety

JIS Z 2320-3:2017, First English edition published in 2017-09

Translated and published by: Japanese Standards Association
Mita MT Building, 3-13-12, 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.

© JSA 2017

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

KK/AT

Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
2A Terms and definitions	2
3 Safety requirements	2
4 Types of devices	2
4.1 Portable electromagnets	2
4.2 Current generators	4
4.3 Magnetic benches	6
4.4 Specialized testing systems	8
5 UV-A sources	9
5.1 General	9
5.2 Technical data	9
5.3 Technical requirements	9
6 Detection media system	10
6.1 General	10
6.2 Technical data	10
6.3 Technical requirements	10
7 Inspection booth	10
7.1 General	10
7.2 Technical data	10
7.3 Technical requirements	11
8 Demagnetization	11
8.1 General	11
8.2 Technical data	11
8.3 Technical requirements	11
9 Measurements	11
9.1 General	11
9.2 Current measurement	12
9.3 Magnetic field measurement	12
9.4 Viewing conditions	13
9.5 Verification and calibration of instruments	13
Annex JA (informative) Comparison table between JIS and corresponding International Standard	14

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 Japanese Society for Non-Destructive Inspection (JSNDI)/Japanese Standards Association (JSA) 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 Z 2320-3:2007** is replaced with this Standard, and **JIS Z 2321:1993** has been withdrawn and replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

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

JIS Z 2320 series consists of the following 3 parts under the general title “*Non-destructive testing—Magnetic particle testing*”:

Part 1: General principles

Part 2: Detection media

Part 3: Equipment

Non-destructive testing—Magnetic particle testing—Part 3: Equipment

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 9934-3:2015**, Edition 2, with some modifications of the technical contents in order to correspond to the conventionally used method.

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

1 Scope

This Standard describes three types of equipment for magnetic particle testing:

- a) portable or transportable equipment;
- b) fixed installations;
- c) specialized testing systems for testing components on a continuous basis, comprising a series of processing stations placed in sequence to form a process line.

Equipment for magnetizing, demagnetizing, illumination, measurement, and monitoring are also described.

This Standard specifies the properties to be provided by the equipment supplier, minimum requirements for application and the method of measuring certain parameters. Where appropriate, measuring and calibration requirements and in-service checks are also specified.

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

ISO 9934-3:2015 *Non-destructive testing—Magnetic particle testing—Part 3: Equipment* (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 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.

JIS C 0920 *Degrees of protection provided by enclosures (IP Code)*

NOTE : Corresponding International Standard: IEC 60529 *Degrees of protection provided by enclosures (IP Code)* (IDT)

JIS G 3101 *Rolled steels for general structure*