

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS H 8304 : 2024

(JTSS/JSA)

Ceramic sprayed coatings

ICS 25.220.20

Reference number : JIS H 8304 : 2024 (E)

PROTECTED BY COPYRIGHT

16 S

H 8304 : 2024

Date of Establishment: 1980-04-01

Date of Revision: 2024-02-20

Date of Public Notice in Official Gazette: 2024-02-20

Investigated by: Japanese Industrial Standards Committee
Standards Board for ISO area

JIS H 8304 : 2024, First English edition published in 2024-07

Translated and published by: Japanese Standards Association
Mita Avanti, 3-11-28, 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 2024

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

HN

PROTECTED BY COPYRIGHT

Contents

	Page
1	Scope 1
2	Normative references 1
3	Terms and definitions 1
4	Classification and symbols 1
5	Spraying process 2
5.1	General 2
5.2	Structure, shape and surface condition of sprayed product 2
5.3	Pretreatment 2
5.4	Thermal spraying 2
5.5	Post-treatment 3
5.6	Outdoor thermal spraying work 3
6	Quality 3
6.1	General 3
6.2	General quality requirements 3
6.3	Specific quality requirements according to application 4
7	Test methods 6
7.1	General 6
7.2	Appearance test 7
7.3	Test of structure of coating cross-section 7
7.4	Coating thickness test 8
7.5	Adhesive strength test 8
7.6	Coating hardness test 8
7.7	Thermal shock resistance 9
7.8	Corrosion resistance test 10
7.9	Electrical insulation test 11
8	Inspection 11
9	Marking 11
Annex A (informative)	Operation standard 12
Annex B (informative)	Wear resistance test 22

Foreword

This Japanese Industrial Standard has been 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 Japan Thermal Spray Society (JTSS)/Japanese Standards Association (JSA) with a draft being attached, based on the provision of Article 12, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act. This edition replaces the previous edition (**JIS H 8304** : 2017), which has been technically revised.

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

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

Ceramic sprayed coatings

1 Scope

This Japanese Industrial Standard specifies requirements for ceramic sprayed coatings (hereafter referred to as sprayed coatings) applied to metallic substrates such as metallic parts and products, for the purposes of giving them wear resistance, corrosion resistance, heat resistance, heat insulation, electrical insulation or other desired characteristics.

2 Normative references

Part or all of the provisions of the following standards, 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 2110-2 *Solid electrical insulating materials — Test methods for electric strength — Part 2 : Tests using direct voltage*

JIS G 3101 *Rolled steels for general structure*

JIS H 8200 *Thermal spraying terms*

JIS H 8250 *Graphical symbol for thermal spraying*

JIS H 8260 *Powders for thermal spraying*

JIS H 8261 *Wires, rods and cords for flame and arc thermal spraying*

JIS H 8302 *Build-up thermal spraying*

JIS H 8401 *Methods of thickness measurement for sprayed coatings*

JIS H 8402 *Test methods of tensile adhesive strength for thermal-sprayed coatings*

JIS H 8451 *Testing methods for measuring thermal cycle resistance and thermal shock resistance for thermal barrier coatings*

JIS Z 2244-1 *Vickers hardness test — Part 1 : Test method*

JIS Z 2371 *Methods of salt spray testing*

JIS Z 8402-6 *Accuracy (trueness and precision) of measurement methods and results — Part 6 : Use in practice of accuracy values*

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS H 8200** apply.

4 Classification and symbols

The classification and symbols of sprayed coatings shall be as follows.