



JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 3443-3 : 2020

(WSP/JSA)

**Coated steel pipes for water
service—Part 3: Long-life external
plastic coatings**

ICS 23.040.10;77.140.75

Reference number : JIS G 3443-3 : 2020 (E)

Date of Establishment: 2007-02-20

Date of Revision: 2020-05-20

Date of Public Notice in Official Gazette: 2020-05-20

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

JIS G 344-3-3:2020, First English edition published in 2020-11

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 2020

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

AT

Contents

	Page
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Classification and grade symbols of long-life plastic coatings	4
5 Materials of long-life plastic coatings	4
6 Long-life plastic coating method.....	4
6.1 Polyurethane coating method	4
6.2 Polyethylene coating method	5
7 Requirements for long-life plastic coatings	5
7.1 Appearance.....	5
7.2 Coating thickness	5
7.3 Length of uncoated part of pipe end	6
7.4 Coating performances	6
8 Test methods	7
8.1 General	7
8.2 Appearance test	8
8.3 Coating thickness test	8
8.4 Length test of uncoated part of pipe end	8
8.5 Pinhole test	8
8.6 Adhesion test	8
8.7 Adhesive property test.....	8
8.8 Pull-off adhesive strength test.....	8
8.9 Peeling strength test.....	8
8.10 Impact resistance test.....	8
8.11 Indentation depth test	9
8.12 Nominal tensile strain test at break	9
8.13 Bending resistance test	9
8.14 Cathodic disbonding resistance test.....	9
8.15 Hot water immersion resistance test	9
9 Inspection	9
9.1 Appearance inspection	9
9.2 Coating thickness inspection	9
9.3 Length inspection of uncoated part of pipe end	10
9.4 Pinhole inspection	10
9.5 Adhesion inspection	10
9.6 Adhesive property inspection	10

9.7	Coating performance (type test) inspection	10
9.8	Re-inspection	10
10	Marking	11
11	Report	11
Annex A (normative)	Polyurethane coating material	12
Annex B (normative)	Primer for polyurethane	17
Annex C (normative)	Polyethylene coating material	21
Annex D (normative)	Performance test methods of polyurethane coating	25
Annex E (informative)	Field weld coatings (joint coat)	32

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 Water Steel Pipe Association (WSP)/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 G 3443-3:2014**), 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.

JIS G 3443 series consists of the following 4 parts under the general title *Coated steel pipes for water service*—

Part 1: Pipes

Part 2: Fittings

Part 3: Long-life external plastic coatings

Part 4: Internal epoxy coatings

Blank

Coated steel pipes for water service— Part 3: Long-life external plastic coatings

1 Scope

This Japanese Industrial Standard specifies the requirements for long-life plastic coatings applied on the external surface of mother pipes used mainly for water works, sewage works, industrial water works and agricultural water works.

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 B 0601 *Geometrical Product Specifications (GPS)—Surface texture: Profile method—Terms, definitions and surface texture parameters*
- JIS B 7503 *Mechanical dial gauges*
- JIS B 7512 *Steel tape measures*
- JIS G 3101 *Rolled steels for general structure*
- JIS G 3141 *Cold-reduced carbon steel sheet and strip*
- JIS G 3443-1 *Coated steel pipes for water service—Part 1: Pipes*
- JIS G 3443-2 *Coated steel pipes for water service—Part 2: Fittings*
- JIS G 3477-1 *Polyethylene coated steel pipes—Part 1: External 3 layer extruded polyethylene coated steel pipes*
- JIS H 8300 *Thermal spraying—Zinc, aluminium and their alloys*
- JIS K 5500 *Glossary of terms for coating materials*
- JIS K 5600-1-1 *Testing methods for paints—Part 1: General rule—Section 1: General test methods (conditions and methods)*
- JIS K 5600-1-2 *Testing methods for paints—Part 1: General rules—Section 2: Sampling*
- JIS K 5600-1-4 *Testing methods for paints—Part 1: General rule—Section 4: Standard panels for testing*
- JIS K 5600-3-4 *Testing methods for paints—Part 3: Film formability—Section 4: Evaluation of the compatibility of product with a surface to be painted*
- JIS K 5600-5-7 *Testing methods for paints—Part 5: Mechanical property of film—Section 7: Adhesion test (Pull-off method)*
- JIS K 5601-1-2 *Testing methods for paint components—Part 1: General rule—Section 2: Determination of non-volatile matter content*
- JIS K 6761 *Polyethylene pipes for general purposes*