

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS G 3443-3 : 2014

(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 : 2014 (E)**

Date of Establishment: 2007-12-20

Date of Revision: 2014-10-20

Date of Public Notice in Official Gazette: 2014-10-20

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

JIS G 3443-3:2014, First English edition published in 2015-04

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 2015

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

HT/AT

Contents

		Page
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	Classification and symbols of long-life plastic coatings	2
5	Long-life plastic coating material	3
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	Appearances	5
7.2	Coating thickness	5
7.3	Length of uncoated area of pipe end	5
7.4	Coating performance	5
8	Test method	6
8.1	General	6
8.2	Appearance test	7
8.3	Coating thickness test	7
8.4	Length test of uncoated area of pipe end	7
8.5	Pinhole test	7
8.6	Adhesion test	7
8.7	Adhesive property test	7
8.8	Pull-off adhesive strength test	7
8.9	Peeling strength test	7
8.10	Impact test	7
8.11	Indentation hardness test	7
8.12	Nominal tensile strain test at break	8
8.13	Bend test	8
8.14	Cure degree test of powder epoxy resin	8
8.15	Cathodic delamination test	8
8.16	Hot water immersion test	8
9	Inspection	8
9.1	Appearance inspection	8
9.2	Coating thickness inspection	8
9.3	Length inspection of uncoated area of pipe end	9
9.4	Pinhole inspection	9
9.5	Adhesion inspection	9

9.6	Adhesive property inspection	9
9.7	Coating performance (type test) inspection	9
9.8	Re-inspection	10
10	Marking	10
11	Report	10
Annex A (normative)	Polyurethane coating material	11
Annex B (normative)	Polyethylene coating material	15
Annex C (normative)	Performance test method of polyurethane coating	19
Annex D (informative)	Field weld coating (joint coat)	23

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 Japan Water Steel Pipe Association (WSP)/ 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 G 3443-3:2007** is 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 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

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

1 Scope

This Japanese Industrial Standard specifies the 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 7512 *Steel tape measures*

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: Single 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 5600-5-7 *Testing methods for paints—Part 5: Mechanical property of film—Section 7: Adhesion test (Pull-off method)*

JIS K 6761 *Polyethylene pipes for general purposes*

JIS K 6900 *Plastics—Vocabulary*

JIS K 6922-2 *Plastics—Polyethylene (PE) moulding and extrusion materials—Part 2: Preparation of test specimens and determination of properties*

JIS K 7111 *Plastics—Methods of determining the density and relative density of non-cellular plastics*

JIS K 7120 *Testing methods of plastics by thermogravimetry*

JIS K 7161-1 *Plastics—Determination of tensile properties—Part 1: General principles*

JIS K 7161-2 *Plastics—Determination of tensile properties—Part 2: Test conditions for moulding and extrusion plastics*

JIS K 7206 *Plastics—Thermoplastic materials—Determination of Vicat softening temperature (VST)*