

JIS

JAPANESE
INDUSTRIAL
STANDARD

Translated and Published by
Japanese Standards Association

JIS A 5011-4 : 2018

(NSA)

**Slag aggregate for concrete — Part 4:
Electric arc furnace oxidizing slag aggregate**

A 5011-4 : 2018

Date of Establishment: 2003-06-20

Date of Revision: 2018-01-22

Date of Public Notice in Official Gazette: 2018-01-22

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

JIS A 5011-4 : 2018, First English edition published in 2018-09

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 2018

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
Introduction	1
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Classification, division and designation	4
4.1 Classification	4
4.2 Division according to particle size	5
4.3 Division according to density in oven dry condition	6
4.4 Division according to alkali-silica reactivity	6
4.5 Designation	6
5 Quality	7
5.1 General	7
5.2 Chemical composition and physical properties	7
5.3 Alkali-silica reactivity	7
5.4 Particle size, fineness modulus and content of materials finer than 75 μm	7
5.5 Environmentally sound quality criteria	9
6 Test methods	10
6.1 Sampling and reduction of sample	10
6.2 Chemical analysis	11
6.3 Tests for density in oven dry condition and water absorption	11
6.4 Bulk density test	11
6.5 Alkali-silica reactivity test	11
6.6 Particle size test	12
6.7 Test for content of materials finer than 75 μm	12
6.8 Tests for environmentally sound quality	12
7 Inspection	12
7.1 Inspection on chemical composition, physical properties, alkali-silica reactivity, particle size, fineness modulus and content of materials finer than 75 μm	12
7.2 Inspection on environmentally sound quality	12
7.3 Management of production lot	14
7.4 Storage of inspection data	14
8 Marking	15
9 Report	15

Annex A (normative)	Chemical composition analysis of electric arc furnace oxidizing slag aggregate	25
Annex B (informative)	Measures for reduction of alkali-silica reactivity	42
Annex C (normative)	Tests for environmentally sound quality of electric arc furnace oxidizing slag aggregate	44
Annex D (informative)	Comparison table between previous and current editions of this Standard on technically significant revisions	50

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 Nippon Slag Association (NSA) 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 A 5011-4:2013** is replaced with this Standard.

However, **JIS A 5011-4: 2013** may be applied in the **JIS** mark certification based on the relevant provisions of Article 19 Clause 1, etc. of the Industrial Standardization Law until July 21, 2018.

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 A 5011 series consists of the following 4 parts under the general title “*Slag aggregate for concrete*”:

Part 1: Blast furnace slag aggregate

Part 2: Ferronickel slag aggregate

Part 3: Copper slag aggregate

Part 4: Electric arc furnace oxidizing slag aggregate

Slag aggregate for concrete —

Part 4 : Electric arc furnace oxidizing slag aggregate

Introduction

This Japanese Industrial Standard mainly specifies the quality requirements for electric furnace slag aggregate to be used for concrete. This Standard was established in 2003 and has been revised twice since then. A comparison table between previous and current editions of this Standard on technically significant revisions is given in Annex D.

No corresponding International Standard has been established at this point.

1 Scope

This Standard provides requirements for electric arc furnace oxidizing slag aggregate to be used for concrete.

It is applicable to electric arc furnace oxidizing slag aggregate products that are manufactured in plants where measures to prevent mixture of reduced slag into the products are provided all through the production process.

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 A 0203 *Concrete terminology*

JIS A 1102 *Method of test for sieve analysis of aggregates*

JIS A 1103 *Method of test for amount of material passing test sieve 75 μm in aggregates*

JIS A 1104 *Methods of test for bulk density of aggregates and solid content in aggregates*

JIS A 1109 *Methods of test for density and water absorption of fine aggregates*

JIS A 1110 *Methods of test for density and water absorption of coarse aggregates*

JIS A 1145 *Method of test for alkali-silica reactivity of aggregates by chemical method*

JIS A 1146 *Method of test for alkali-silica reactivity of aggregates by mortar-bar method*

JIS A 1158 *Method for reducing samples of aggregate to testing size*

JIS H 6201 *Platinum crucibles for chemical analysis*