

Ref: PC-081008

SPRING SINGAPORE CALLS FOR PUBLIC COMMENTS ON SINGAPORE STANDARDS – 8 OCTOBER 2008

Singapore Standards are established based on an open system which is also in accordance with the World Trade Organisation requirements. SPRING Singapore is inviting public comments for the following drafts and Singapore Standards.

Ten drafts to be established as Singapore Standards:

1. Specification for metal scaffoldings (SS 280)

Part 2 : Modular scaffoldings (\$\$6.00 per copy)

This standard specifies the minimum requirements for steel modular scaffolding for use as temporary structures on which persons work and which provides support for the materials used. It is applicable to construction, maintenance, repair and demolition work, shipbuilding and repair, petrochemical and other industries. A key criterion addressed in the standard is on the nodes testing.

Potential users of the standard include MOM, suppliers, manufacturers, testing laboratories, contractors, design engineers and safety professionals.

2. Concrete materials and testing

In support of the industry in migrating towards Eurocodes, the standards on cement and admixtures have been reviewed resulting in the adoption of the relevant EN standards.

Guidelines for testing temperature and humidity to be adopted for Singapore are given in SS EN 197, SS EN 934 and SS EN 15167.

Most cements are imported into Singapore where the manufacturer may not have production control as set out in EN 197 and EN 15167, therefore the recommended sampling plan for imported cement have been included to ensure that quality of cement imported for use in Singapore will have equivalent assurance of quality compared to cement that may be manufactured within Singapore.

SS EN 197 – Cement (Review of SS 26 : 2000, SS 476 : 2000 and SS 477 : 2000)

Part 1 : Composition, specifications and conformity criteria for common cements (\$\$6.00 per copy)

This standard specifies 27 distinct common cement products and their constituents. The definition of each cement includes the proportions in which the constituents are to be combined to produce these distinct products in a range of six strength classes. The definition also includes requirements the constituents have to meet and the mechanical, physical and chemical including, where appropriate, heat of hydration requirements. It also states the conformity criteria and necessary durability requirements.

Part 2 : Conformity evaluation (S\$6.00 per copy)

This standard specifies the scheme for the evaluation of conformity of cements to their corresponding product specification standards, including certification of conformity by a certification body.

Part 4 : Composition, specification and conformity criteria for low early strength blastfurnace cements (S\$6.00 per copy)

This standard specifies 3 distinct low early strength blastfurnace cement products and their constituents. The definition of each cement includes the proportions in which the constituents are to be combined to produce these distinct products in a range of three strength classes. The definition also includes requirements the constituents have to meet and the mechanical, physical, chemical, including where appropriate, heat of hydration requirements. It also states the conformity criteria and necessary durability requirements.

SS EN 934 – Specification for admixtures for concrete, mortar and grout (Review of SS 320 : 1987)

Part 1 : Common requirements (S\$6.00 per copy)

This standard specifies the common requirements for all admixtures covered by SS EN 934-2 and SS EN 934-4.

Part 2 : Concrete admixtures – Definitions, requirements, conformity, marking and labelling (S\$6.00 per copy)

This standard specifies definitions and requirements for admixtures for use in concrete. It covers admixtures for plain, reinforced and prestressed concrete which are used in site mixed, ready mixed concrete and precast concrete. The performance requirements in this standard apply to admixtures used in concrete of normal consistence.

Part 4 : Admixtures for grout for prestressing tendons – Definitions, requirements, conformity, marking and labelling (S\$6.00 per copy)

This standard specifies requirements and conformity criteria for admixtures for use in grouts for prestressing tendons according to EN 447. It covers admixtures for use in site mixed grout only.

Part 6 : Sampling, conformity control and evaluation of conformity (S\$6.00 per copy)

This standard specifies procedures for sampling, conformity control and evaluation of conformity, for admixtures according to the series SS EN 934.

SS EN 15167 – Specification for ground granulated blast furnace slag for use in concrete, mortar and grout

Part 1 : Definitions, specifications and conformity criteria (S\$6.00 per copy)

This standard specifies requirements for the chemical and physical properties as well as quality control procedures for ground granulated blastfurnace slag for use as a type II addition in the production of concrete, including in particular cast-in-situ or prefabricated structural concrete conforming to SS EN 206-1 (under preparation). Ground granulated blastfurnace slag conforming to this Singapore Standard may also be used in mortars and grouts.

Part 2 : Conformity evaluation (S\$6.00 per copy)

This standard specifies the scheme for the evaluation of conformity of ground granulated blastfurnace slag according to SS EN 15167-1. It provides technical rules for the production control by the manufacturer, including autocontrol testing of samples.

Those who would be interested in the above SS EN standards include building professionals, government agencies such as BCA, HDB, LTA, testing laboratories, suppliers, manufacturers, engineers and consultants.

Twenty-eight Singapore Standards proposed for withdrawal:

It is proposed to withdraw SS 26, SS 78, SS 320, SS 397, SS 476 and SS 477 with the publication of the relevant SS EN standards. However, to allow the industry time to phase in to the proposed EN standards and to prepare for necessary changes, the current Singapore Standards will co-exist with the abovementioned SS EN standards and EN test methods below for a period of not more than 3 years from the time of publication of the relevant SS EN standards.

The test methods below have been reviewed and found to be suitable for local use.

| S/N | Singapore Standards proposed for withdrawal | Users are advised to refer directly to the following EN |
|-----|--|---|
| 3. | SS 320 : 1987 – Concrete admixtures | EN 480 – Admixtures for concrete, mortar and grout – Test methods Part 1: 2006 – Reference concrete and reference mortar for testing Part 2 : 2006 – Determination of setting time Part 4 : 2005 – Determination of bleeding of concrete Part 5 : 2005 – Determination of capillary absorption Part 6 : 2005 – Infrared analysis Part 8 : 1997 – Determination of the conventional dry material content Part 10 : 1997 – Determination of water soluble chloride content Part 11 : 2005 – Determination of air void characteristics in hardened concrete Part 12 : 2005 – Determination of the alkali content of admixtures |
| 4. | SS 397 – Method of testing cement Part 1 : 1997 – Determination of strength Part 2 : 1997 – Chemical analysis of cement Part 3: 1997 – Determination of setting time and soundness Part 6 : 1997 – Determination of fineness Part 7 : 1997 – Methods of taking and preparing samples Part 21 : 1997 – Determination of the chloride, carbon dioxide and alkali content of cement | BS EN 196 – Method of testing cement Part 1 : 2005 – Determination of strength Part 2 : 2005 – Chemical analysis of cement Part 3 : 2005 – Determination of setting time and soundness Part 5 : 2005 – Pozzolanicity test for pozzolanic cement (<i>no equivalent SS</i>) Part 6 : 2005 – Determination of fines Part 7 : 2007 – Methods of taking and preparing samples of cement Part 8 : 2003 – Heat of hydration – Solution method (<i>no equivalent SS</i>) Part 9 : 2003 – Heat of hydration – Semi-adiabatic method (<i>no equivalent SS</i>) Part 21 : 2005 – Determination of the chloride, carbon dioxide and alkali content of cement |

| S/N | Singapore Standards proposed for withdrawal | Users are advised to refer directly to the following EN |
|-----|--|--|
| 5. | SS 78 – Testing concrete Part A1 : 1987 – Method of sampling fresh concrete on site Part A2 : 1987 – Method for determination of slump Part A3 : 1987 – Method for determination of compacting factor Part A4 : 1987 – Method for determination of Vebe time Part A5 : 1987 - Method for Determination of Flow Part A6 : 1987 – Methods for determination of air content of fresh concrete Part A7 : 1987 – Method for determination of density of compacted fresh concrete Part A8 : 1987 – Method for making test cubes from fresh concrete Part A9 : 1987 – Method for making test beams from fresh concrete Part A11 1987 - Method of Normal Curing of Test Specimens (27 Degrees C Method) Part A14 : 1987 – Methods for determination of density of hardened concrete Part A15 : 1987 – Specification for compression testing machines for concrete Part A16 : 1987 – Method for determination of compressive strength of concrete cubes Part A17 : 1987 – Method for determination of tensile splitting strength Part A18 : 1987 – Method for determination of flexural strength Part A20 : 1987 – Method for determination of the compressive strength of concrete cores Part B2:1992 - Recommendations for Surface Hardness Testing by Rebound Hammer Part B3 : 1992 - Recommendations for Measurement of Velocity of Ultrasonic Pulses in Concrete | EN 12350 – Testing fresh concrete Part 1 : 2000 – Sampling Part 2 : 2000 – Slump test Part 3 : 2000 – Vebe test Part 4 : 2000 – Degree of compactability Part 5 : 2000 – Flow table test Part 6 : 2000 – Density Part 7 : 2000 – Air content – Pressure methods EN 12390 – Testing hardened concrete Part 1 : 2000 – Shape, dimensions and other requirements of specimens and moulds Part 2 : 2000 – Making and curing specimens for strength tests Part 3 : 2002 – Compressive strength of test specimens Part 4 : 2000 – Compressive strength. Specification for testing machines’ Part 5 : 2000 – Flexural strength of test specimens Part 6 : 2000 – Tensile splitting strength of test specimens Part 7 : 2000 – Density of hardened concrete Part 8:2000 Depth penetration of water under pressure EN 12504 Test concrete in structures Part 1 : 2000 Cored specimens – Taking, examining and testing in compression Part 2 : 2001 Non-destructive testing. Determination of rebound number Part 3 : 2005 Determination of pull-out force Part 4 : 2004 Determination of ultrasonic pulse velocity |

Main users of above standards include BCA, SAC-SINGLAS and testing laboratories.

Nineteen Singapore Standards to be reviewed:

6. Steel reinforcement and test methods

The following specifications will be reviewed with the intention of adopting the relevant EN in support of the migration to Eurocodes.

Steel for the reinforcement of concrete (SS 2)

Part 1 : 1999 – Plain bars (steel grade 300)

Part 2 : 1999 – Ribbed bars (steel grade 500)

Part 3 : 1987 – Plain and ribbed bars (steel grades 250 and 460)

Specification for cold-reduced steel wire for the reinforcement of concrete and the manufacture of welded fabric (SS 18)

Part 1 : 1999 – Steel grade 500

Part 2 : 1970 – Steel grade 485

Specification for welded steel fabric for the reinforcement of concrete (SS 32)

Part 1 : 1999 – Steel grades 300 and 500

Part 2 : 1986 – Steel grade 485

Steel bars for reinforcement of concrete – Bend and rebend tests (SS 427 : 1998)**Specification for metallic materials – Tensile testing at ambient temperature (SS 456 : 1999)****Specification for steel for the prestressing of concrete (SS 475)**

Part 1 : 2000 – General requirements

Part 2 : 2000 – Cold-drawn wire

Part 3 : 2000 – Quenched and tempered wire

Part 4 : 2000 – Strand

Part 5 : 2000 – Hot-rolled steel bars with or without subsequent processing

Those who are interested in the standards include government agencies such as BCA, LTA, HDB, suppliers, manufacturers, testing laboratories, engineers, consultants and contractors.

7. Code of practice for the use of timber in buildings (SS CP 1 : 2001)

This code lays down requirements regarding design and quality of material. It specifies dimensions and species of timber suitable for application in buildings. The purpose of this code is to prescribe dimensions which will be adequate for the satisfactory function of the various non-structural members and which will at the same time ensure efficient utilisation of timber resources.

Users of the code include interior designers, architects, timber suppliers, HDB and SCDF.

8. Specification for polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V (SS 358)**Part 1 : 1996 – General requirements**

This standard applies to rigid and flexible cables with insulation, and sheath if any, based on polyvinyl chloride, of rated voltages U_0/U up to and including 450/750 V used in power installations of nominal voltage not exceeding 450/750 V a.c.

Part 2 : 2005 – Test methods

This standard specifies methods of carrying out the tests as stated in other parts of SS 358.

Part 3 : 1996 – Non-sheathed cables for fixed wiring

This standard details the particular specifications for polyvinyl chloride insulated single-core non-sheathed cables for fixed wiring of rated voltages up to and including 450/750 V. The 500 mm² and 600 mm² conductor sizes are included in the revised standard.

Part 5 : 2005 – Flexible cables (cords)

This standard provides the particular specifications for polyvinyl chloride insulated flexible cables (cords) of rated voltages up to and including 300/500 V. It is used in the Consumer Protection (Safety Requirements) Registration Scheme.

The review of SS 358 would possibly lead to the withdrawal of the standards as direct reference can be made to the current relevant parts of IEC 60227.

One new work item:

The public can provide comments on the following new standardisation projects which have just commenced:

9. Maintenance of exterior features

Given Singapore's densely built environment and its increasing maturing stock of buildings, maintenance of building façade is important in preventing fatal consequences of falling exterior features (please refer to the Building Control Act for definition of exterior features).

BCA is currently working with SPRING Singapore to develop a maintenance standard for the various exterior features. The proposed standard aims to harmonise the different practices and standards of professionalism among organisations providing maintenance services by providing minimum requirements for the maintenance of exterior features.

(Note: This new work item is at the preparatory stage, thus the draft is not available at this juncture.)

Copies of the drafts and standards are available for reference/sale at:

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1 Kim Seng Promenade #18-01
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Fax: (65) 6820 3341
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Contact person: Mr Rahman Daud

Operating Hours:
Mon to Fri: 9.30am to 6.00pm
Closed on Saturdays, Sundays and Public Holidays

The closing date for comments is **9 December 2008** for the establishment and proposed withdrawal of Singapore Standards and **10 November 2008** for the review of Singapore Standards and the commencement of new work. The public can send their comments on-line through http://www.spring.gov.sg/public_comments or by post or fax (65) 6278 6990 to:

Head
Standardisation Department
SPRING Singapore
5th Level Podium Block
2 Bukit Merah Central
Singapore 159835

For more information on the standards, please contact Mrs Kay Chua, Senior Administrative Executive at Tel: (65) 6279 1804, Email: kay_chua@spring.gov.sg or Fax: (65) 6278 6990.

Frequently asked questions about public comment on Singapore Standards:

1. What is public comment?

Singapore Standards are established based on an open system which is also in accordance with the World Trade Organisation requirements. These documents are issued as part of a consultation process before any standards are introduced or reviewed. This important stage in the development of Singapore Standards is the Public Comment period. This mechanism helps industry, companies and other stakeholders be aware of forthcoming changes to Singapore Standards and provide them with an opportunity to influence, before their publication, the standards that have been developed by their industry and for their industry.

2. How does public comment benefit me?

The benefits are:

- It ensures that your views are considered and gives you the opportunity to influence the content of the standards in your area of expertise and in your industry;
- It enables you to be familiar with the content of the standards before they are published and you stand to gain a competitive advantage with this prior knowledge of the standards.

3. Why do I have to pay for the draft?

The drafts are available for **free viewing** at SNP at the address given above. However, a nominal price of \$6.00 per copy of the drafts is charged for copyright and administrative reasons for those who wish to purchase the drafts. National standards are knowledge documents developed by standards committees for the specific industry. The release of the draft for public comment is to allow other members of the industry affected to make the standard more suitable for their use. The charge for public comments on national standards is an international norm for national standards bodies and free distribution is not possible due to copyright reasons as national standards are an embodiment of knowledge. ISO/IEC sells the ISO/IEC draft standards at the full price similar to a published ISO/IEC standard.

4. Why do I have to pay for the standards which are proposed for review, withdrawal or archival?

These standards are available for **free viewing** at SNP at the address given above. However, the normal price of the standard will be charged for those who wish to purchase a copy. At the stage where we propose to review, withdraw or archive the standards, the standards are still current and in use. We seek comments for these standards so as to:

- provide an opportunity for the industry to provide inputs for the review of the standard that would make the standard suitable for the industry's use,
- provide feedback on the continued need for the standard so that it will not be withdrawn,
- provide feedback to update the standard proposed for archival given that an archived will be kept in its present form and will not be updated.

5. What happens after I have submitted my comments?

The comments will be channelled to the relevant standards committee for consideration and you will be informed of the outcome of the committee's decision and you may be invited to meet the committee if clarification is required on your feedback.

6. What is archival of standards?

Archived standards are standards that are not expected to change over time, and are still in use. A review would be initiated only upon a request from the industry or the standards committee.

7. Can I purchase drafts after the public comment period?

Drafts will not be available after the public comment period.

8. How do I request for a new standard?

You can inform us of your standardisation needs by completing the Proposal Form found at:
http://www.standards.org.sg/files/invitation_to_new_standards.htm

9. How do I get updates of Singapore Standards or standardisation activities?

We provide a free email alert service, "Update Me". You can register at:
<http://www.standards.org.sg/Forms/UpdateMe.cfm>

For more information on the national standardisation programme, please visit the Standards Website at:
<http://www.standards.org.sg/index.cfm>.