

An MND Statutory Board

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See **Distribution**

Dear Sir/Madam

REVISED BC1: 2023 AND REQUIREMENT FOR BC1 AUDIT BY SAC-ACCREDITED CERTIFICATION BODY

Objective

This circular is to inform the industry of the publication of the revised design guide BC1: 2023 and the requirement for BC1 audit to be carried out by a certification body ("CB") that is accredited by the Singapore Accreditation Council ("SAC").

Background

2 BC1 – "Design Guide on Use of Alternative Steel Materials to BS 5950" was published in 2008 to expand the range of available structural steel materials for local use and ensure their conformity, quality and traceability from different sources. The guide was subsequently updated to include a list of structural steel standards that can be used for design in conjunction with the Singapore Eurocodes.

3 This circular supersedes the earlier two circulars on BC1 issued in Aug 2008 and Apr 2013, as we have now updated and published the document as **BC1: 2023 "Design Guide for the Use of Alternative Structural Steel to Eurocode 3"**.

Revised Publication of BC1

4 In this revision of BC1, references to BS 5950 and its associated standards have been removed. This design guide has also been updated with the latest list of steel standards and expanded to encompass steels manufactured to the Korean standards. With this revision, certification agencies previously tasked to do audits under BC1 will now have to be accredited by the SAC as certification bodies to perform these audits.

5 This revised BC1 will be incorporated in the next update of the Approved Document. Notwithstanding that, industry practitioners can adopt the use of this design guide immediately if they wish to do so. This document and its accompanying Handbook are available for download from BCA website at the following link:

- (i) BC1: 2023 – <https://go.gov.sg/bc1-2023>
- (ii) Handbook to BC1: 2023 – <https://go.gov.sg/handbook-to-bc1-2023>

BC1 Audits by SAC-Accredited CB

6 The document SAC CT 24 – SAC Criteria for Certification Bodies (Alternative Structural Steel in BC1) was published by SAC on 30 Nov 2021 and as required by this revision of BC1, certification agencies previously tasked to conduct audits under BC1 must now be accredited by the SAC for the requirements of SAC CT 24.

7 A number of certification agencies are in the midst of being accredited, or have already been accredited by SAC. Hence, effective from **01 Jan 2024** (the “Effective Date”), new Factory Production Control (“FPC”) certificates issued by certification agencies that are not accredited will not be acceptable.

Pertinent Points to Note

8 There are a few pertinent points that we wish to highlight in relation to the use of BC1: 2023. These are described in the following paragraphs:

- (i) FPC Certificates for BS EN Steel Materials Issued Under the European Union Construction Directives and API Monograms – Steel materials manufactured to BS EN standards with FPC certificates bearing CE Marking issued under the European Union Construction Directives, and API Monograms of hollow sections specified in Annex A.2.3 of BC1, are considered acceptable in-lieu of an FPC certificate to BC1.
- (ii) Material Performance Requirements – Alternative steel material shall be manufactured in accordance with an international or national standard (e.g. ASTM, JIS, AS/NZ, GB or KS) and shall meet the relevant material performance requirements listed in Section 2 of BC1. Specifically, whichever requirement is more onerous, whether from the international/national standard or Section 2 of BC1, shall govern the material performance of the alternative steel material.
- (iii) Material Testing – Material testing for demonstrating the adequacy of non-certified steel materials shall be carried out as described in Section 4.1.2 of BC1. This is separate from the construction tests to be carried out under Regulation 39 of the Building Control Regulations, which requires construction tests to be carried out in respect of the materials used in the building works. Hence, notwithstanding that BC1 has been complied with, construction tests would need to be carried out for both Class 1 and Class 2 steel materials. Qualified Persons may refer to the “Guide Book for Site Supervision Plan” which was jointly published by BCA/IES/ACES, for guidance on the construction tests.
- (iv) Validity of FPC Certificates Issued Before the Effective Date - Existing FPC certificates issued before the Effective Date will remain acceptable until the end of their validity. Certification agencies are advised to obtain accreditation by SAC as CBs before the Effective Date.

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For Clarification

9 We would appreciate if you could bring to the attention of your members the content of this circular. Should you need clarification on this matter, you may call our hotline at 1800 342 5222, or use our Online Feedback Form at: <https://www.bca.gov.sg/feedbackform/>.

Yours faithfully



LUNG HIAN HAO
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