

Code of Practice BS5973 replacement

This issue provides an update on the re-write of BS5973 and a reminder of why it is necessary. The new document will be relevant to the use of traditional materials only (Tube, Fittings, Boards and Ancillary items). System scaffolding will not be included and will refer to the new EN 12811 European Standard.

Ian Nicoll who chairs our Technical Working Party on this subject and Don Gourd have combined to produce this report and survey form. They are both highly respected members and have been involved with the NASC Technical Committee for many years. They also represent the NASC on the BSI Sub Committee, responsible for the replacement document.



Ian Nichol

Technical
Innovation
Award
2003

**Don't forget its
not too late to
enter for this
years technical
award.**

Show us the creative qualities
your company is capable of.

For the revised closure date
and all other relevant
information refer to the back
page.



Entrants can photocopy or tear
off the back page.

Gary Gallagher

Chairman – Technical Committee

BS5973 Update - Where are we now?

The view of the NASC is that BS 5973 should be rewritten to ensure that when European Standards EN 12810 and EN 12811 Part 1 are formally issued, the normal working practices of Britain's scaffolding contractors remain unaffected.

In order to do this the NASC Technical Committee has set up a Working Party to review and advise on the work involved. The initial review was sent to NASC Council on 30 May 2001 and identified the sections of BS 5973 to be rewritten because of the many fundamental issues within EN 12811 which could cause significant difficulty for the UK scaffolding industry, including:

1. EN 12811 does not provide any guidance or information on Permissible Stress methods of analysis currently provided in the British Standard. The majority of scaffolds in the UK are designed using the Permissible Stress method as directed by BS 5973 and there is minimal knowledge of limit state methods of analysis within the industry.

This may lead to safety issues if insufficient time is provided for training and understanding the new document.

2. The European Standards require all scaffolds to be designed – in order to provide a background to traditionally designed scaffolds it will be necessary to have generic designs, which will justify all existing traditional scaffolds. This will satisfy the design requirements within EN 12811 Part 1 and is likely to form a significant part of the rewriting of BS 5973.
3. The European Standards will not provide specific information on UK wind loading conditions, which the current BS 5973 addresses. This will mean that other British Standards may need to be used for wind loading criteria, which may not be appropriate for scaffolding frameworks.

4. Special details of scaffolding applications within BS 5973 including truss out scaffolds, hoist towers, cantilevers and roofs etc will not be included in EN 12811 Part 1. All will need to be designed from first principles rather than use being made of current information in the British Standard.
5. EN 12811 Part 1 calls for platforms to be free from bracing. BS 5973 states that alternate standards are braced to full height. This conflict between the two needs to be addressed in the rewrite of BS 5973.

Since May 2001 we have been in discussion with BSI and HSE to prepare the ground for the rewrite. There has been considerable progress to date with the BSI and a draft tender document has been prepared. Consultants have been approached to tender for the analysis work required in Item 2 above and the rewriting of clauses to ensure they are compatible with the European Standards.

The program for the work has been timetabled with a start to be made in early 2003. A draft document for public comment is planned for later in the year. However, we need to enlist your help in preparing the ground for the Consultants. What are you, the scaffolding industry, using in the field? If you are using any specification of tube other than EN39, please complete the following table and return to the NASC as soon as possible.

Section Properties of EN39 Tube

SECTION PROPERTIES	48.3 mm tube
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Outside diameter =	48.3	mm
Wall thickness =	4	mm
Inside diameter =	40.3	mm
Weight =	4.37	kg/m

Cross sectional area.

Area = $PI (D^2 - d^2) / 4 =$	556.69	mm ²
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Elastic Modulus.

$Z = PI (D^4 - d^4) / (32 \times D) =$	5700.86	mm ³
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Second moment of area.

$I = PI (D^4 - d^4) / 64 =$	137676	mm ⁴
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Radius of gyration.

$r = \sqrt{(D^2 + d^2) / 4} =$	6.65582	mm
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Allowable Axial Stress (pc) =	See table 14 - BS5973
Allowable Bending Stress (pbc) =	155 N/mm ²

If you are using tube that has a different specification to the standard tube show above, please complete the chart below and return to Dave Chapman at the NASC.

SECTION PROPERTIES	
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Outside diameter =		mm
Wall thickness =		mm
Inside diameter =		mm
Weight =		kg/m

Cross sectional area.

Area = $PI (D^2 - d^2) / 4 =$		mm ²
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Elastic Modulus.

$Z = PI (D^4 - d^4) / (32 \times D) =$		mm ³
--	--	-----------------

Second moment of area.

$I = PI (D^4 - d^4) / 64 =$		mm ⁴
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Radius of gyration.

$r = \sqrt{(D^2 + d^2) / 4} =$		mm
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Allowable Axial Stress (pc) =		N/mm ²
Allowable Bending Stress (pbc) =		N/mm ²

TECHNICAL INNOVATION AWARD 2003

Aims to:

Encourage good ideas, methods & solutions to problems faced and to provide a platform to demonstrate the levels of ingenuity that exist in our industry.

There will be two separate Award categories:-

- (1) Scaffold (i.e. completed scaffold structures)
- (2) Product

HOW TO ENTER AND RULES

- (i) Submissions for the scaffold category must be for a scaffold built within Calendar Year 2002.
- (ii) Describe (using up to a maximum of 500 words, 3 photographs, 1 drawing), the innovative qualities, what makes the scaffold technically superior or unusual, the problems or challenges to be overcome.
- (iii) Product submissions should be for new inventions which will benefit the scaffolding industry as a whole.
- (iv) Entrants must be willing to permit the NASC to publicise the submission. However, any photographs used will be accompanied by the competitor's name.
- (v) NASC members' fee to enter this competition is free of charge with respect to the annual member subscription. Non NASC members may enter the competition, however a cheque for £250 must accompany each submission.
- (vi) Photographs of the scaffold or product are required and must be supported with written descriptions.
- (vii) Entries should be addressed to the NASC Technical Committee, 56-64 Leonard Street, London EC2A 4JX and must be received by 31 March 2003.

Finalists will be selected by a Judging Panel, chaired by the NASC Director + 2 other Independent Technical & Safety experts. Winners will be announced at the NASC Annual Conference in May 2003. Decisions will be final.

New and good technical ideas should be encouraged, this could be your way of maximising publicity and acceptance!

Company Name

Company Address

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Contact Name

Telephone No.

Fax No.

Email Address

