

TG20:13 Supplement 1

This document is a supplement to TG20:13, the comprehensive guide to good practice for tube and fitting scaffolding published by the NASC.

The supplement is intended to be used with version 1.1 of the TG20:13 eGuide, the interactive guide to TG20, which is available for download from the NASC website.

In addition to describing the improvements made to the eGuide software, this supplement extends TG20:13 by permitting the use of 3.2mm wall thickness high tensile cold-formed steel tubes to BS EN 10219-1 in accordance with an appropriate TG 20 compliance sheet.

Information in this supplement

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TG20 eGuide 1.1

This supplement should be used in conjunction with the new version of the TG20:13 eGuide, which is available as a software update from the NASC website:

www.nasc.org.uk/tg20_13/tg20_13_supplement_1_and_eguide_update

The new features and enhancements provided by version 1.1 of the TG20 eGuide are described in this section.

3.2mm cold formed high-tensile tubes

TG20 compliance sheets are now available for scaffolding formed with 3.2mm thick high-tensile galvanised steel tubes manufactured by a cold forming process to BS EN 10219-1.

Further information is provided in section 1.2 of this supplement.

Sheeted scaffolds with transom units

Version 1.1 of the TG20 eGuide now provides TG20 compliance sheets for sheeted independent scaffolding and tied towers constructed using TG20 compliant prefabricated transom units.

All TG20 compliant sheeted scaffolds require ledger bracing at alternate frames, including those with transom units, as stated on the TG20 compliance sheets.

For any TG20 compliant sheeted scaffolding, a structural butting transom or push-pull tie is required at every node point as described in section 6.8 of the TG20:13 Operational Guide, irrespective of whether prefabricated transom units or conventional tube-and-fitting construction is adopted.

For the transom units at each end frame in every lift the inner coupler nearest the façade should be reinforced by securely fixing supplementary right angle couplers to the ledger one each side in contact with the transom unit coupler.

Guidance for TG20 compliant prefabricated transom units is provided in section 4.5 of the TG20:13 Operational Guide.

Additional enhancements

The TG20 compliance sheets produced by version 1.1 of the TG20 eGuide also include a number of minor enhancements.

A note has now been added to the foot of each compliance sheet to state that any illustrations it contains are intended to be indicative and are not design drawings. Instead, they are an aid to identifying and understanding the design criteria described on the sheet.

Some minor modifications to the text of the compliance sheets have also been made. The criterion that describes when it is permitted to connect tie tubes to the inner face of the scaffold only has been clarified, as has the horizontal tie spacing for scaffolds with bay lengths less than 2.0m.

Whilst the NASC recommends that the latest version of the TG20 eGuide and its compliance sheets are always used, the enhancements provided in version 1.1 of the eGuide do not invalidate the compliance sheets in the TG20:13 Operational Guide or any previously-issued compliance sheets.

TG20 compliance sheets produced with the original version of the eGuide, or from the Operational Guide, are still valid.

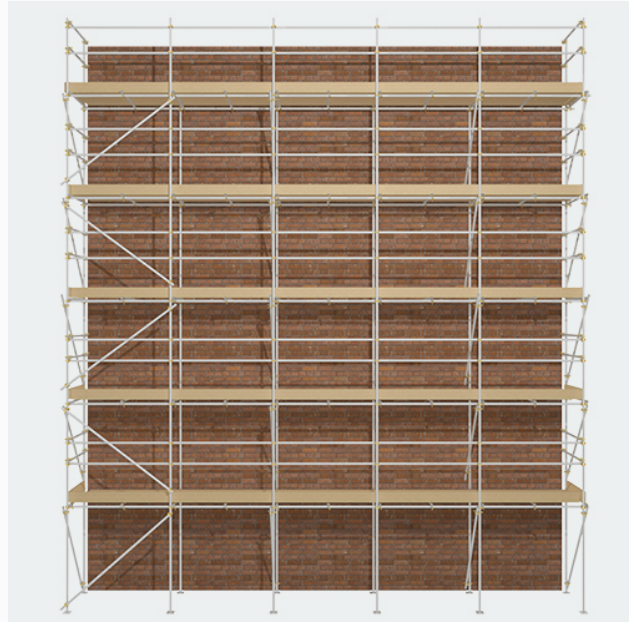
Identifying the TG20 eGuide version

It is possible to identify which of your computers or mobile devices have been updated to the latest version of the TG20 eGuide by pressing the 'i' icon in the top-right corner of the Welcome screen. This displays the About screen, which includes the version number and other information.



Independent scaffold

A tied independent scaffold with 2.0 m maximum lift heights



Location

Suitable for sites with a wind factor of 24.5 (moderate wind exposure).

Criteria

To be erected as a TG20 compliant tied independent scaffold

- ✓ May be formed from high-tensile galvanised steel tubes of 3.2 mm wall thickness and minimum 355 N/mm² design strength to BS EN 10219-1;

Figure 1.1: A compliance sheet for high-tensile steel tubes.

High-tensile steel tubes

This supplement extends the tube types permitted for TG20 compliant scaffolding to include 3.2 mm thick high tensile galvanised *cold formed* steel scaffold tubes supplied in accordance with BS EN 10219-1.

Background

Section 4.1 of the TG20:13 Operational Guide states that TG20 compliant scaffolds may be formed from BS EN 39 type 4 galvanised steel tubes or equivalent.

It also defines a specification for 3.2 mm thick high-tensile galvanised *hot rolled* steel tubes to BS EN 10210-1 grade S355, which offer structural performance comparable with type 4 steel tubes despite their lesser thickness.

However, many of the high-tensile steel scaffold tubes supplied to the UK scaffolding industry are manufactured with a cold-formed process to BS EN 10219-1.

This supplement extends TG20:13 to specify the conditions under which tubes to this specification can be used for TG20 compliant scaffolding.

Tube specification

Tubes used in accordance with this supplement must be high-tensile galvanised steel tubes of 48.3 mm diameter, 3.2 mm wall thickness and minimum 355 N/mm² design strength supplied in accordance with BS EN 10219-1.

Such tubes can be identified on delivery with a stamped marking, or as a minimum with an attached tag, to include as a minimum the steel designation ('EN 10219 – S355 JOH') and the manufacturer's name or trademark. The marking or

tag should also include the section designation (including thickness) in accordance with the EN.

Tubes supplied to this standard have a lower axial load capacity than type 4 steel tubes or hot-rolled high-tensile steel tubes, as shown in tables 5.10 and 5.10a of the TG20:13 Design Guide. As such, the TG20 compliance sheets supplied with the TG20:13 Operational Guide should not be used for scaffolds constructed from them.

Version 1.1 of the TG20 eGuide addresses this by providing compliance sheets for tubes of this specification.

TG20 compliance sheets

A new option for selecting the required tube material has been provided in the TG20 eGuide, as shown in figure 1.2.

If cold-formed high-tensile steel tubes are selected, this is stated on the compliance sheet as shown in figure 1.1.

If type 4 galvanised steel tubes (or equivalent) are selected, the tube material is not specified on the compliance sheet and the scaffold must be in accordance with the guidance in the TG20:13 Operational Guide as previously.

Only the tube types defined in the Operational Guide may be used with the TG20 compliance sheets provided with the Operational Guide and with version 1.0 of the TG20 eGuide.

Using mixed tube stocks

If a mixed stock of scaffolding tubes is used, combining cold formed high-tensile steel tubes with type 4 steel tubes, TG20 compliance sheets for cold formed high-tensile steel tubes must be used to allow for their lower axial load capacity.

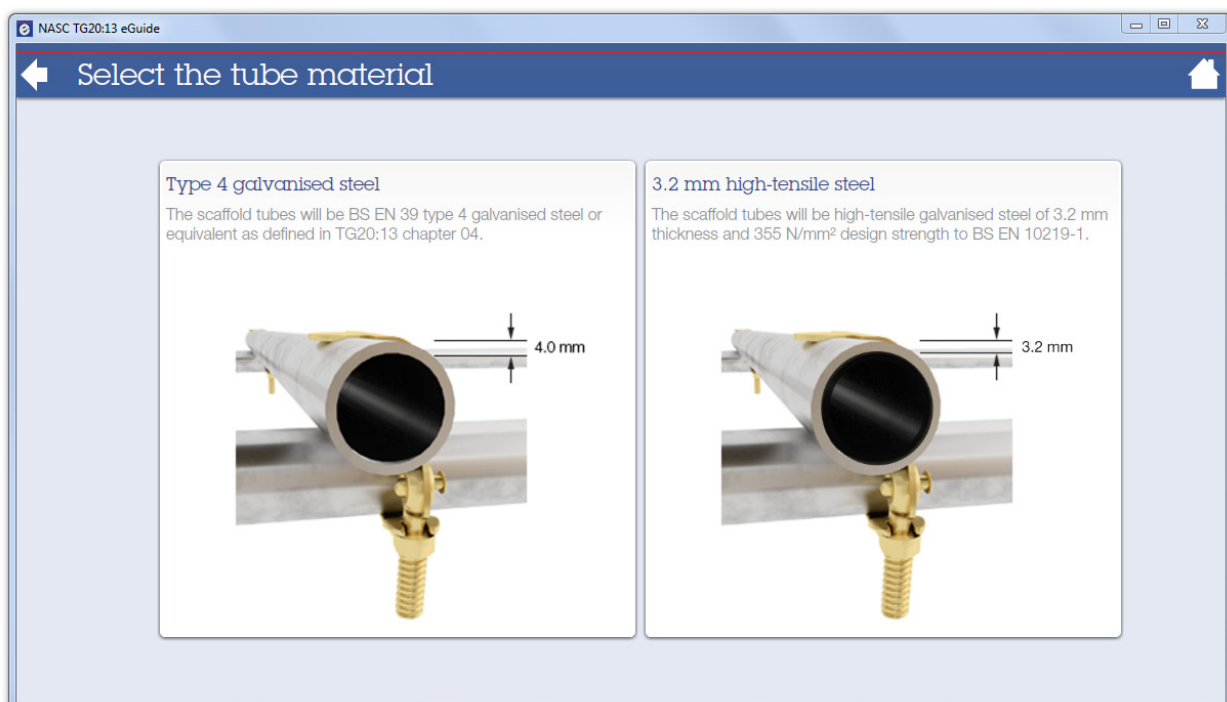


Figure 1.2: Selecting the scaffold tube material from version 1.1 of the TG20 eGuide.

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