in a separate clause the revised standard states that no reduction in lateral torsional buckling resistance is needed if $\bar{\lambda}_{LT} \leq \bar{\lambda}_{LT,0}$ where $\bar{\lambda}_{LT,0}$ is recommended to be taken as 0.4. This is a nationally determined parameter, but if it stays as 0.4, it would mean there is a step in resistance at that point, as shown in Figure 4.

Designers should note that the Eurocodes are not yet "final". There may still be changes, and the work on the National Annex has not yet commenced. Only when this work is complete can the significant task or revising publications, design tools and software be undertaken. ■

1 The Eurocodes are coming... but does the steel know?
Brown, D.G.
New Steel Construction, January 2005

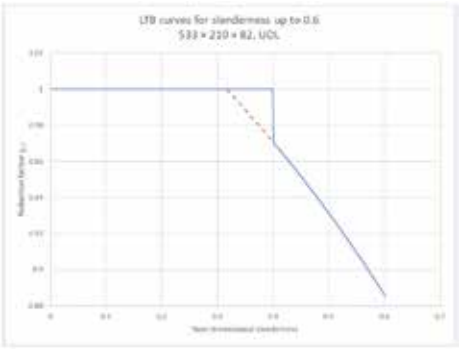

Figure 4: Reduction factor χ_{LT}

AD 463:
Corrections to BS 5950-5:1998

Although this Code of practice was withdrawn in 2010, many designers of cold formed thin gauge sections still use it to verify members. During the course of some recent work, we have noticed two problems with Table D1. This table is useful, as it gives expressions for the position of the shear centre and for the Warping constant (known as C_w in BS 5950, and I_w in the Eurocode suite).

In the fourth row of the table, expressions for a lipped 'C' section are given. The lips are facing inward as shown in Figure 1(a). The expression for the Warping constant should only have positive terms within the bracketed part of the equation. The correct expression is:

$$C_w = \frac{b^2t}{6}(4b_L^3 + 3d^2b_L + 6db_L^2 + bd^2) - I_x e^2$$

The next row has a lipped 'C' section with the lips facing outwards, as shown in Figure 1(b), with a very similar expression for C_w. These sections are sometimes known as "top hat" sections. The expression for C_w for this section does have a negative term within the bracket and is correct.

The next row in the table (which is over the page in the code) has a diagram of precisely the same 'top hat' section, but very different formulae – it is clear that the diagram is incorrect. The correct shape is a lipped angle, as shown with the appropriate labelling of the elements in Figure 2.

Designers are recommended to review Annex C of BS EN 1993-1-3 which presents a general approach to calculate the Warping constant I_w and the Torsional constant I_t for thin-walled open sections. The advantage of this method is that it is applicable to any shape of cross section, only requiring the centre line co-ordinates of the node points between flat elements of the cross section. The method is appropriate for a spreadsheet

Contact: SCI Advisory
Tel: 01344 636555
Email: advisory@steel-sci.com

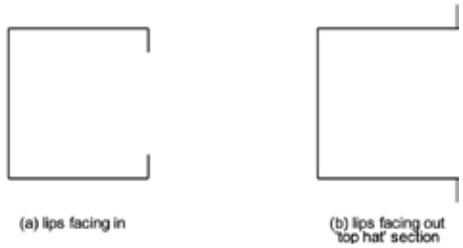

Figure 1: Lipped 'C' sections

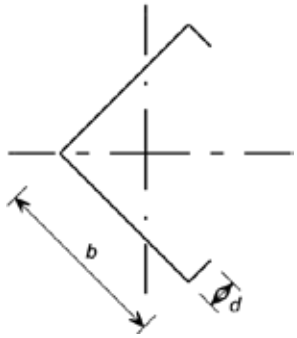

Figure 2: Lipped angle

New and revised codes and standards

From BSI Updates May 2021

BS EN PUBLICATIONS

BS EN 13001-2:2021
Crane safety. General design. Load actions
supersedes BS EN 13001-2:2014

BS IMPLEMENTATIONS

BS ISO 23322:2021
Paints and varnishes. Determination of solvents in coating materials containing organic solvents only. Gas-chromatographic method
no current standard is superseded

BRITISH STANDARDS REVIEWED AND CONFIRMED

BS ISO 4306-3:2016
Cranes. Vocabulary. Tower cranes

BS ISO 9926-3:2016
Cranes. Training of operators. Tower cranes

NEW WORK STARTED

ISO 6707-3
Buildings and civil engineering works. Vocabulary. Sustainability terms
will supersede BS ISO 6707-3:2017

BS 7121-2-7:2012+A2
Code of practice for the safe use of cranes hoists and their supporting structures
will supersede BS 7121-2-7:2012+A1:2015

DRAFT BRITISH STANDARDS FOR PUBLIC COMMENT – ADOPTIONS

21/30394409 DC
BS EN ISO 9220 Metallic coatings. Measurement of coating thickness. Scanning electron microscope method
Comments for the above document were required by 17 May, 2021

21/30421184 DC
BS EN 17632 Building Information Modelling (BIM). Semantic Modelling and Linking (SML)
Comments for the above document were required by 10 May, 2021

21/30432856 DC
BS EN 14717 Welding and allied processes. Environmental check list
Comments for the above document were required by 18 May, 2021