

AD 404:

Columns in simple construction

SCI has received reports that some designers are disregarding the rules for the design of columns in [braced frames](#) (simple construction). In some cases the columns have been designed for an axial load only - even when the loading from the beams is not symmetrical. In another case with a [fin plate connection](#) the assumed eccentricity from the face of the column was the actual dimension to the bolt line, rather than the nominal 100 mm.

The rules governing the [design of columns in simple construction](#) are given in clause 4.7.7 of BS 5950-1 and – for design to the Eurocodes, NCCI document SN048, available at <http://www.steel-ncci.co.uk/>.

Whatever style of [nominally pinned connection](#) is to be used, the nominal moment is calculated based on an eccentricity from the face of the column of 100 mm, even if the physical dimension to the assumed location of the pin is

different. A net moment will result if the beam reactions are different on either axis; the moment is distributed to the column lengths above and below.

The rules for this type of column design, including the apparently arbitrary nominal eccentricity from the column face of 100 mm have reassuring provenance – they were described in BS 449 and had been successfully used for decades. Designers should not depart from these rules without careful consideration.

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New and revised codes & standards

From BSI Updates December 2016 and January 2017

BS EN PUBLICATIONS

BS EN 10027-1:2016

Designation systems for steels. Steel names
Supersedes BS EN 10027-1:2005

BS EN ISO 17638:2016

Non-destructive testing of welds. Magnetic particle testing
Supersedes BS EN ISO 17638:2009

BRITISH STANDARDS UNDER REVIEW

BS EN ISO 14174:2012

Welding consumables. Fluxes for submerged arc welding and electroslag welding. Classification

DRAFT BRITISH STANDARDS FOR PUBLIC COMMENT – ADOPTIONS

16/30342991 DC

[BS EN ISO 13918](#) Welding. Studs and ceramic ferrules for arc stud welding
Comments for the above document were required by the 3rd December, 2016

BRITISH STANDARDS UNDER REVIEW

ISO 148-1:2016

(Edition 3)
Metallic materials. Charpy pendulum impact test. Test method
Will be implemented as an identical British Standard

ISO 148-2:2016

(Edition 3)
Metallic materials. Charpy pendulum impact test. Verification of testing machines
Will be implemented as an identical British Standard

ISO 148-3:2016

(Edition 3)
Metallic materials. Charpy pendulum impact test. Preparation and characterization of Charpy V-notch test pieces for indirect verification of pendulum impact machines
Will be implemented as an identical British Standard

ISO 17638:2016

(Edition 2)
Non-destructive testing of welds. Magnetic particle testing
Will be implemented as an identical British Standard

NEW WORK STARTED

EN ISO 4014

Hexagon head bolts. Product grades A and B
Will supersede BS EN ISO 4014:2011

EN ISO 4015

Hexagon head bolts. Product grade B. Reduced shank (shank diameter approximately equal to pitch diameter)
Will supersede BS EN 24015:1992

EN ISO 4016

Hexagon head bolts. Product grade C
Will supersede BS EN ISO 4016:2011

EN ISO 4017

Fasteners. Hexagon head screws. Product grades A and B
Will supersede BS EN ISO 4017:2014

EN ISO 4018

Hexagon head screws. Product grade C
Will supersede BS EN ISO 4018:2011

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