

AD 448: Support to profiled steel decking

It is now over ten years since the revised edition of P300 was published by SCI. This work, in collaboration with the Metal Cladding and Roofing Manufacturers' Association (MCRMA), benefitted from considerable practitioner input. Since the demise of the MCRMA's decking group, more recent practitioner comment on updating the content has come from BCSA's Cold Formed and Metal Decking Group.

One area where the BCSA Group felt it was worth adding some more detail concerns the support provided to steel decking around penetrations, and at ends and edges.

Support around a penetration

The guidance in P300 says that flashing should not be used to support decking around penetrations. Such supports should be provided by shelf angles or similar. The BCSA Group confirms this approach, and notes that the need for shelf angles should be identified at the design stage. This will mean

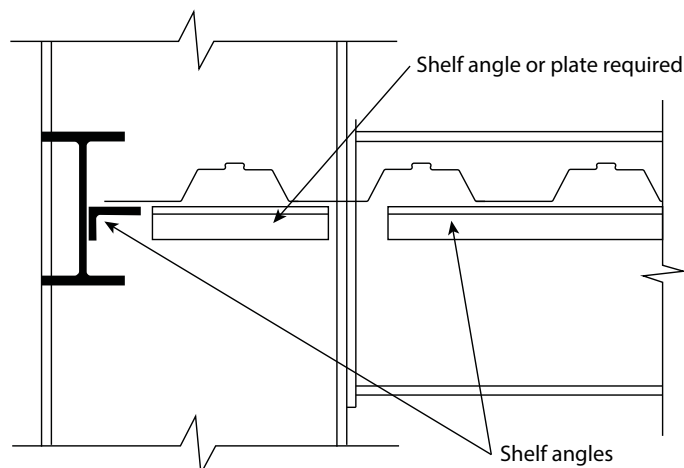


Figure 1: Decking penetrated by a 'wide' column and requiring additional end support

they can be included as part of the shop fabrication and thereby fixed in a controlled environment rather than on-site and potentially working at height.

P300 states that such (structural) support should be provided when the decking is penetrated by a column resulting in a deck edge dimension in excess of 250 mm with no beam underneath to provide

support. Figure 1 is taken from P300, showing a column with a 'width' in excess of 250 mm and the decking around this column therefore requiring end support from an angle fixed to the column web. The figure also shows shelf angles providing the beam framing in to the column flange, and edge support to the decking abutting the beam framing

in to the column web.

The BCSA Group has added some detail to this requirement, based on the fact that decking is effectively one-way spanning and so noting that:

- Up to 250 mm is acceptable as a structurally unsupported length along the edge of decking
- At the ends of the decking this critical dimension should be reduced to 50 mm

End and edge supports

The BCSA Group confirms that the guidance given in P300, namely that shelf angles should be used, remains current. Also, as for support around penetrations, that the shelf angles are identified during design and included as part of the shop fabrication.

When a soffit is exposed, and so aesthetics are important, where practical continuous support should be provided to all ends and edges.

Contact: **Graham Couchman**
Tel: **01344 636555**
Email: **advisory@steel-sci.com**

New and revised codes & standards

From BSI Updates August 2020

BS EN PUBLICATIONS

BS EN ISO 1182:2020

Reaction to fire tests for products. Non-combustibility test
supersedes BS EN ISO 1182:2010

BS EN ISO 10863:2020

Non-destructive testing of welds. Ultrasonic testing. Use of time-of-flight diffraction technique (TOFD)
supersedes BS EN ISO 10863:2011

BS EN ISO 19650-5:2020

Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM). Information management using building information modelling. Security-minded approach to information management
no current standard is superseded

BS IMPLEMENTATIONS

BS ISO 21678:2020

Sustainability in buildings and civil engineering works. Indicators and benchmarks. Principles, requirements and guidelines
no current standard is superseded

BS ISO 22410:2020

Corrosion of metals and alloys. Electrochemical measurement of ion transfer resistance to characterize the protective rust layer on weathering steel
no current standard is superseded

PUBLISHED DOCUMENTS

PD 6705-2:2020

Structural use of steel and aluminium. Execution of steel bridges conforming to BS EN 1090-2. Guide
supersedes PD 6705-2:2010+A1:2013

CORRIGENDA TO BRITISH STANDARDS

NA+A1:2020 to BS EN 1991-2:2003
National Annex (informative) to BS EN 1991-2:2003, Eurocode 1: Actions on structures. Traffic loads on bridges

BRITISH STANDARDS REVIEWED AND CONFIRMED

BS EN ISO 9018:2015

Destructive tests on welds in metallic materials. Tensile test on cruciform and lapped joints

BS EN ISO 14919:2015

Thermal spraying. Wires, rods and cords for flame and arc spraying. Classification. Technical supply conditions

BS EN ISO 23277:2015

Non-destructive testing of welds. Penetrant testing. Acceptance levels

BS EN ISO 23278:2015

Non-destructive testing of welds. Magnetic particle testing. Acceptance levels

NEW WORK STARTED

EN 15942

Sustainability of construction works. Environmental product declarations. Communication format business-to-business
will supersede BS EN 15942:2011

EN 15978-1

Sustainability of construction works. Methodology for the assessment of performance of buildings. Environmental Performance
will supersede None

ISO 22058

Construction procurement- guidance on the development of strategy and tactics
will supersede None

PD 7974-7+A1

Application of fire safety engineering principles to the design of buildings. Probabilistic risk assessment
will supersede PD 7974-7:2019