

# AD 434:

## Validity rules for hollow section joints

This AD note concerns a significant typographical error in Table 7.8 of BS EN 1993-1-8. The table presents validity limits for welded joints between [hollow section](#) brace members and RHS chord members.

For the common case of a K or N overlap, there is a limitation under the “Gap or overlap” column expressed as:

$$b_i/b_j \leq 0.75$$

where  $b_i$  is the width of the overlapping bracing member, and  $b_j$  is the width of the overlapped member. Thus the limit precludes

bracing members of the same size, for which  $b_i/b_j = 1$ , and this is clearly wrong.

In fact, the limit should be expressed as:

$$b_i/b_j \geq 0.75$$

which prevents a narrow overlapping bracing being [welded](#) to a wide overlapped brace, but permits bracing of the same width to be used.

This limit is correctly expressed in literature published by Tata Steel, and has been corrected in the draft revisions to EN 1993-1-8.

As an aside, it may assist designers to note that definitions of some factors that appear in

the joint verification expressions, such as  $\beta$ ,  $\lambda_{ov}$ ,  $n$  and  $\gamma$  are found in Section 1.5 of BS EN 1993-1-8, not in Section 7 as might be expected. Similarly the definition and dimensions of gap and overlap joints are found in Figure 1.3, rather than in the section concerned with hollow section joints.

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