CLOSURE

Flexible Moment Connections for Unbraced Frames Subjected to Lateral Forces—A Return to Simplicity

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(Second Quarter, 2005)

Discussion by Louis F. Geschwindner and Robert O. Disque

The authors wish to thank David Nethercot for his discussion of our paper, particularly for his confirmation that this basic approach is still in use in the United Kingdom. He also points out the significance of the assumptions used for the column bases. He is correct that, in the past, many of the Type 2 with wind designs carried out in the United States had assumed a fixed-base model and that this assumption might lead to a significant underestimation of building drift. In this paper, we have included pinned bases in both the strength and drift calculations in order to address that shortcoming of past work.

The authors also wish to thank Christopher Foley and John Schaad for their contribution. Their numerical studies have expanded on our paper by presenting the results of a series of nonlinear analyses that confirm the behavior modeled in our paper. Their use of a distributed plasticity model and nonlinear structural behavior clearly demonstrates that the structure designed by the flexible moment connection (FMC) approach produces members and connections that perform, under a complex analysis, within the assumptions of the FMC approach.

We are happy to have this detailed study; however, extensive additional studies of example frames by this type of analysis are not required to justify the method. The fundamental validity of the FMC approach is clearly established in the paper, and the influence of the simplifying assumptions has been documented.

Finally, Nethercot's assertion that "as with all methods of structural design, it must be used in an intelligent fashion" and Foley and Schaad's comment that "one should always be mindful of the fundamental assumptions upon which the FMC approach is based" are important reminders of every designer's responsibility. We thank both discussers for again highlighting this.