Discussion

Bridge Construction Details

Paper presented by LALLY AND MILEK (January, 1969 issue)

Discussion by **G. F. Vansant**

There are Details illustrating this article which I feel would mislead engineers in design situations where girders or stringers are framed on steep grades, whether on main line or ramps. In particular, I refer to Details 1 and 4 on Page 5 and to Detail 1 on Page 7. On Page 4, Detail 2 is somewhat at fault, yet it has restraining bars welded to the lower flange of the stringer. The quarrel I have with these Details is the suggestion that it is proper to use an upward convex surface to receive the bearing of a flat sole plate. This combination produces an unstable vector effect at the bearing and results in a tendency for the beam to slide off the bearing when the beam is placed on a steep grade. On the other hand, if the situation were reversed and the sole plate were detailed to be convex downward, thereby resting on a level surface, the desired stability would be produced naturally and the undesired tendency for the beam to slide off the bearing would be prevented.

I regret that I must be concerned with these small details, yet successful structures rely heavily on refined and intelligent details. I would like for the authors to reflect on these suggestions and offer their own comments in response.

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