



FIGURE 9.2  
Effective reinforcement for HSS to HSS connections

for axial (punching) capacity and 73 combinations for moment capacity, with values of  $\beta$  from 0.25 to 0.80 and plate thickness  $t_p$  from  $t_0$  to  $2t_0$ .

A comparison was also made with earlier (Korol *et al.* 1977) test results of seven full size specimens. They ranged from an HSS 152x152x4.8 beam on an HSS 254x254x9.5 column with a 9.5 mm thick plate to an HSS 384x384x8.0 beam on an HSS 305x305x9.5 column with a 19 mm plate.

Recommendations by Korol *et al.* (1977) to obtain full strength connections are

1. Plate width should be at least equal to the flat width of the HSS face (that is, taken to be  $\geq b_0 - 4t_0$ ).
2. Plate length should be twice the HSS column width, i.e.,  $2b_0$ .
3. Plate thickness depends on whether axial or bending loads dominate. For full axial compression capacity of the branch,