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CODE

COMMENTARY

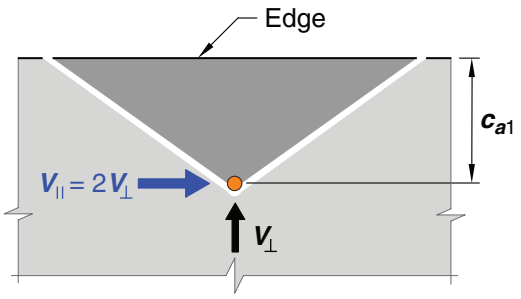

***Fig. R17.7.2.1c**—Shear force parallel to an edge.*

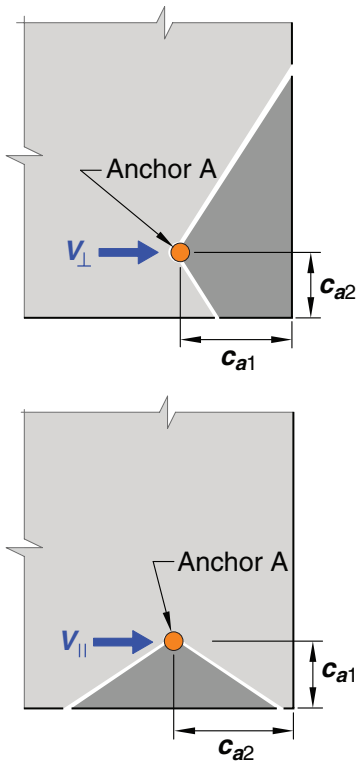

***Fig. R17.7.2.1d**—Shear near a corner.*

17.7.2.1.2 If anchors are located in narrow sections of limited thickness such that both edge distances c_{a2} and thickness h_a are less than $1.5c_{a1}$, the value of c_{a1} used to calculate A_{Vc} in accordance with 17.7.2.1.1 as well as for the equations in 17.7.2.1 through 17.7.2.6 shall not exceed the greatest of (a) through (c).

(a) $c_{a2}/1.5$, where c_{a2} is the greatest edge distance
(b) $h_a/1.5$
(c) $s/3$, where s is the maximum spacing perpendicular to direction of shear, between anchors within a group

R17.7.2.1.2 For anchors located in narrow sections of limited thickness where the edge distances perpendicular to the direction of load and the member thickness are less than $1.5c_{a1}$, the shear breakout strength calculated by the CCD Method (refer to R17.5.1.3) is overly conservative. These cases were studied for the Kappa Method (Eligehausen and Fuchs 1988), and the problem was pointed out by Lutz (1995). Similar to the approach used for concrete breakout strength in tension in 17.6.2.1.2, the concrete breakout strength in shear for this case is more accurately evaluated if the value of c_{a1} used in 17.7.2.1 through 17.7.2.6 and in the calculation of A_{Vc} is limited to the maximum of two-thirds of the greater of the two edge distances perpendicular to the direction of shear, two-thirds of the member thickness, and one-third of the maximum spacing between individual anchors within the group, measured perpendicular to the direction of shear. The limit on c_{a1} of at least one-third of the maximum spacing between anchors within the group

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