CODE

COMMENTARY

9.7—Reinforcement detailing

9.7.1 *General*

9.7.1.1 Concrete cover for reinforcement shall be in accordance with 20.5.1.

9.7.1.2 Development lengths of deformed and prestressed reinforcement shall be in accordance with 25.4.

9.7.1.3 Splices of deformed reinforcement shall be in accordance with 25.5.

9.7.1.4 Along development and lap splice lengths of longitudinal bars with $f_y \geq$ **550 MPa**, transverse reinforcement shall be provided such that K_{tr} shall not be smaller than $0.5d_b$.

9.7.1.5 Bundled bars shall be in accordance with 25.6.

R9.7—Reinforcement detailing

9.7.2 *Reinforcement spacing*

9.7.2.1 Minimum spacing s shall be in accordance with 25.2.

9.7.2.2 For nonprestressed and Class C prestressed beams, spacing of bonded longitudinal reinforcement closest to the tension face shall not exceed s given in 24.3.

9.7.2.3 For nonprestressed and Class C prestressed beams with h exceeding 900 mm, longitudinal skin reinforcement shall be uniformly distributed on both side faces of the beam for a distance $h/2$ from the tension face. Spacing of skin reinforcement shall not exceed s given in 24.3.2, where c_c is the clear cover from the skin reinforcement to the side face. It shall be permitted to include skin reinforcement in strength calculations if a strain compatibility analysis is made.

R9.7.2 *Reinforcement spacing*

R9.7.2.3 For relatively deep beams, some reinforcement should be placed near the vertical faces of the tension zone to control cracking in the web (Frantz and Breen 1980; Frosch 2002), as shown in Fig. R9.7.2.3. Without such auxiliary reinforcement, the width of the cracks in the web may exceed the crack widths at the level of the flexural tension reinforcement.

The size of the skin reinforcement is not specified; research has indicated that the spacing rather than bar size is of primary importance (Frosch 2002). Bar sizes No. 10 to No. 16, or welded wire reinforcement with a minimum area of 210 mm^2 per meter of depth, are typically provided.