

CODE

25.5.3 Lap splice lengths of welded deformed wire reinforcement in tension

25.5.3.1 Tension lap splice length ℓ_{st} of welded deformed wire reinforcement in tension with cross wires within the lap splice length shall be the greater of $1.3\ell_d$ and 200 mm, where ℓ_d is calculated in accordance with 25.4.6.1(a), provided (a) and (b) are satisfied:

- (a) Overlap between outermost cross wires of each reinforcement sheet shall be at least 50 mm.
- (b) Wires in the direction of the development length shall all be deformed MD200 or smaller

25.5.3.1.1 If 25.5.3.1(a) is not satisfied, ℓ_{st} shall be calculated in accordance with 25.5.2.

25.5.3.1.2 If 25.5.3.1(b) is not satisfied, ℓ_{st} shall be calculated in accordance with 25.5.4.

25.5.3.1.3 If the welded deformed wire reinforcement is zinc-coated (galvanized), ℓ_{st} shall be calculated in accordance with 25.5.4.

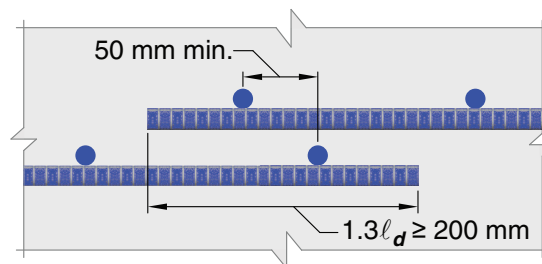
25.5.4 Lap splice lengths of welded plain wire reinforcement in tension

25.5.4.1 Tension lap splice length ℓ_{st} of welded plain wire reinforcement in tension between outermost cross wires of each reinforcement sheet shall be at least the greatest of (a) through (c):

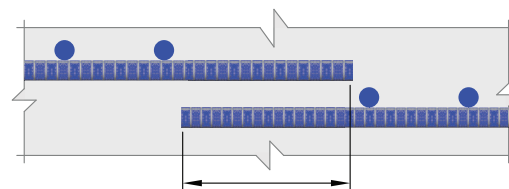
COMMENTARY

R25.5.3 Lap splice lengths of welded deformed wire reinforcement in tension

R25.5.3.1 Splice provisions for welded deformed wire reinforcement are based on available tests (Lloyd and Kesler 1969). Lap splices for welded deformed wire reinforcement meeting the requirements of this provision and 25.5.3.1.1 are illustrated in Fig. R25.5.3.1. If no cross wires are within the lap length, the provisions for deformed wire apply.



Lap splice satisfies R25.5.3.1a



Same as deformed wire (25.5.2)

Lap splice satisfies R25.5.3.1.1

Fig. R25.5.3.1—Lap splices of welded deformed wire reinforcement.

R25.5.3.1.2 Where any plain wires, or deformed wires larger than MD200, are present in the welded deformed wire reinforcement in the direction of the lap splice or where welded deformed wire reinforcement is lap spliced to welded plain wire reinforcement, the reinforcement should be lap spliced in accordance with the plain wire reinforcement lap splice requirements. Deformed wire larger than MD200 is treated as plain wire because tests show that MD290 wire will achieve only approximately 60 percent of the bond strength in tension given by Eq. (25.4.2.4a) (Rutledge and DeVries 2002).

R25.5.4 Lap splice lengths of welded plain wire reinforcement in tension

R25.5.4.1 The strength of lap splices of welded plain wire reinforcement is dependent primarily on the anchorage obtained from the cross wires rather than on the length of wire in the splice. For this reason, the lap is specified in terms of overlap of cross wires (in mm) rather than in wire