Use 8 mm bars @ 100 mm c/c, 5 nos. along long span in edge strip and 8 mm bars) 140 mm c/c, 5 nos. along short span in edge strip.

The slab should be checked in shear at short edge, and in development length both at ıort and long edges as done in case A. It will be found safe. Curtail alternate bars at '10th of span from the centre of supports in each direction. Provide 50 % of the aximum midspan reinforcement at top near the support to resist moments due to partial xity.

orner reinforcement

rea of each layer of reinforcement

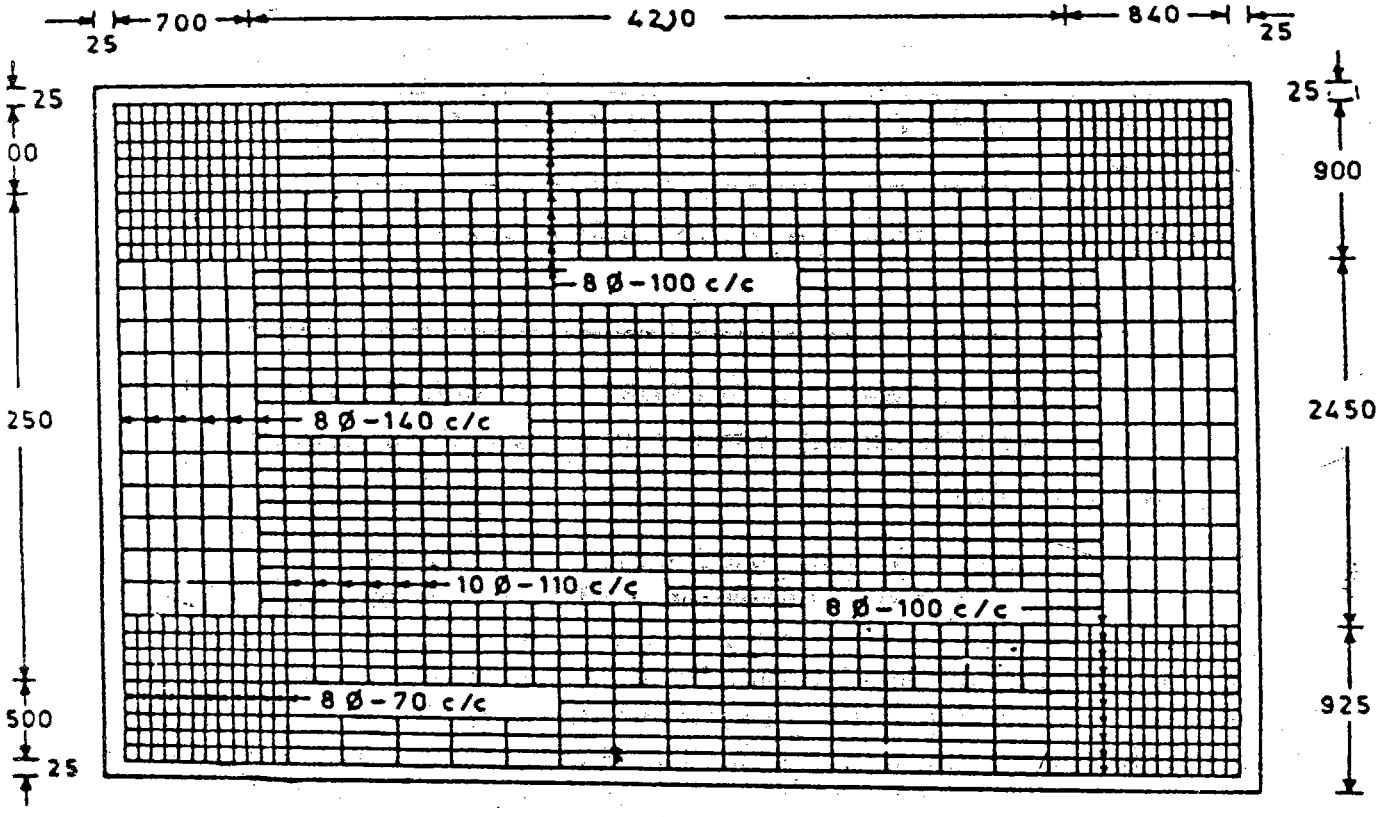
= 75 % of area required for maximum midspan moment

= $0.75 \times 646 = 485$ mm^2

Use 8 mm bars @ 70 mm c/c along short span and 8 mm bars @ 100 mm c/c along ıng span in four layers in each corner. Length of corner reinforcement $= (1/5) \times 4090 =$ 18 mm. Adopt a length equal to 900 mm along the short edge, and equal to 840 mm ong the long edge for the sake of convenience in placing the corner reinforcement.

The slab should be checked in deflection and modifications be made, if necessary.

The reinforcement details are shown in Figs. 14.15a, 14.15b, and 14.15c. To form the ıesh at top and bottom both, at each corner, the bottom bars are taken upto the edge of ab and then bent in U shape as shown in Fig. 14.15d.



(a) PLAN OF BOTTOM REINFORCEMENT

Fig. 14.15 Reinforcement in two-way slabs with corners held down (contd.)

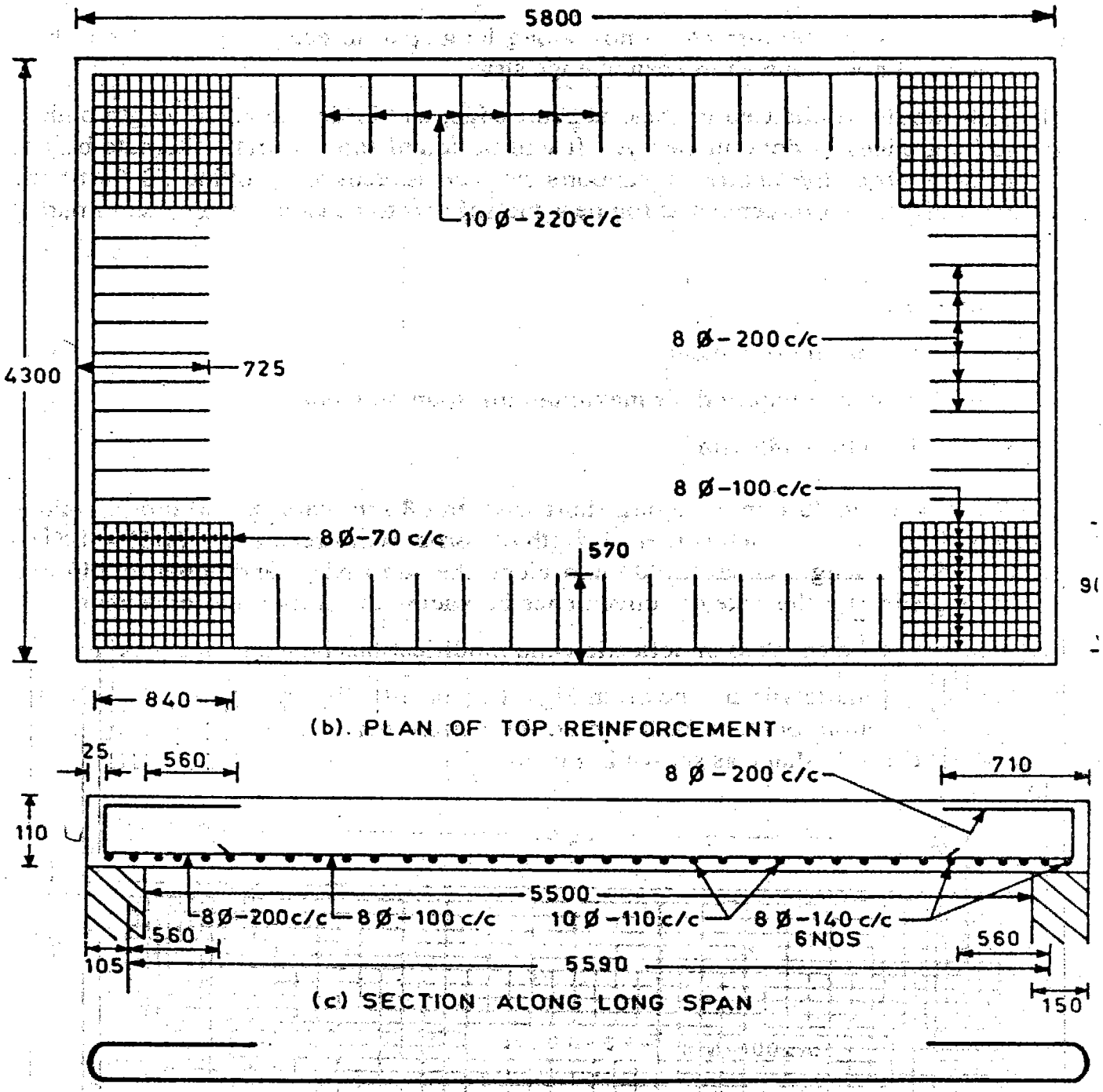


Fig. 14.15 Reinforcement in two-way slabs with corners held down

14.4 CIRCULAR SLABS

Circular slabs are more commonly used in the design of circular water tank containers with flat bottom and circular raft foundations. The analysis of stresses in these slabs is generally based on elastic theory. Under uniformly distributed loads, these slabs deflect in the form of a saucer and develop radial and circumferential stresses. Tensile stresses develop on the convex surface and compressive stresses develop on the concave surface. Thus, the reinforcement must be provided in the radial and circumferential directions near the convex surface. Alternatively, reinforcing bars can be provided in two mutually perpendicular directions instead of in the radial and circumferential directions. Normally, near the centre of the slab, reinforcement is provided in the form of mutually right angle mesh; and near the edge of the slab, in the form of radial and circumferential bars.