CHAPTER 3

OBJECTIVES AND SCOPE

3.1 OBJECTIVES

The following objectives have been formulated to conduct the research in this thesis:

- To study the characteristics of Steel Fibre Reinforced (SFRC) deep beams under loading.

- To evaluate the ultimate capacity of SFRC deep beams and compare the same with that of the conventional concrete beam.

- To study in depth the diagonal cracking in SFRC beam.

- To investigate the reason for the spacing between the cracks both in SFRC and conventional concrete beams.

- To study the forces transmitted across the cracks in SFRC beam which were reinforced by external bars across the crack.

- To perform non-linear finite element analysis of tested beam by modelling it.

- To validate the experimental results and compare with numerical results.
3.2 SCOPE

To cast RC beam of size 600 mm long and of 80 mm width with span to depth ratio of 1.0, 1.25 mm, 1.5 mm and 2.0 mm with M20 concrete with w/c ratio of 0.49.

- To reinforced the beam with 12 mm and 16 mm bars in tension.

- To use of percentages of steel fibre of 1.0, 1.2, 1.4 and 1.5 in casting SFRC beam.