Experimental investigations have been made to study the behaviour of various types of beam-column connections of steel fibrous concrete, when tested under static as well as slow cycle fatigue load. In all 10 nos. full scale two span beam with column stub, beam-column cross type connections have been tested. 4 nos. cross type connections were cast with conventional concrete, 2 nos. with steel fibrous concrete and 4 nos. with steel fibrous concrete in the joint region only. It has been observed that steel fibrous concrete, improved the ductility at the joint region, increased load carrying capacity, decreased cracks, required no shear reinforcement & has overcome the problem of spalling of concrete in the joint region.

20 nos. Knee type connections and 20 nos. Tee type beam-column connections also have been tested to their ultimate limit. The same behaviour was observed in these specimens also. Steel fibres are very effective as shear reinforcement.

Flexure and shear beams have also been tested to find a relation between the flexural strength of matrix and that of fibrous concrete, and between shear strength
of fibrous concrete and the flexural strength of fibrous concrete.

A theoretical method has been suggested to design a steel fibrous concrete beam-column connection.