

## **Abstract**

A model of the flexural behaviour of a cement-based composite reinforced with low modulus fibres is presented. The model predicts large increases in the flexural strength of such composites under certain conditions. An experimental programme was carried out on sisal fibre-reinforced cement; the results of this work confirmed the theoretical predictions, with increases in flexural strength - by a factor of more than three - being achieved with suitable choices of mix parameters and fibre incorporation techniques. It is suggested that the results obtained will be of considerable potential in such areas as housing construction in developing countries.