**SEISMIC PERFORMANCE EVALUATION OF RC BUILDING CONNECTED WITH AND WITHOUT X-BRACED FRICTION DAMPERS**

**ABSTRACT**

The dissertation work is concerned with the comparison of the seismic evaluation of RC buildings connected with and without friction dampers, the method carried out in terms of equivalent static, response spectrum and pushover analysis according to IS 1893:2002(part1) code.G+5, G+10 and G+15 storey buildings respectively are considered for the analysis. In this analysis for friction damper buildings, the dampers are connected at corners of all the buildings.

The comparison of equivalent static method and response spectrum method by using finite element software package ETABS version 9.7.4 is used to perform the modeling and analysis of G+5, G+10 and G+15 storey buildings by considering the seismic zone IV as per IS 1893:2002(part 1) code. For analysis various IS codes have been referred. For Gravity load combination IS 456:2000 and for 0.9, 1.2 and 1.5 seismic load combinations as per IS 1893:2002 (part 1) code is referred. In this study building model analysis carried out namely gravity, equivalent static and response spectrum in longitudinal direction & transverse direction discussed and comparisons of codal values of the software analysis values. Results of these analyses are discussed in terms of the time period, storey displacement, storey drift and base shear. From these results it is concluded that time period, storey displacement and storey drift will be more in regular buildings compare with the friction damper buildings, whereas the base shear will be less in regular buildings compare with the friction damper buildings.