

Seismic Strengthening Of Stone Masonry Wall Using Horizontal Bands

Abstract— This paper introduces a technically feasible and economically affordable horizontal bandage retrofitting technique for low earthquake resistant masonry structures in developing countries as Nepal. An unreinforced masonry wall section has been tested for lateral strength before and after introduction of horizontal bands. The wall thus seismic strengthened by introduction of horizontal bands using section modifier. The Stresses developed in wall of retrofitted model are decreased by 5090% than its original modal. The analysis demonstrates introduction of horizontal bands can mitigate the risk to unreinforced masonry wall buildings in future scenario earthquakes. This method improves the in-plane and out-ofplane mechanism of unreinforced masonry wall.

Keywords— *Horizontal bands, Retrofitting, Stone Masonry, Section modifier.*