

MASONARY STRUCTURES

3-0-0-0-9

Properties of constituents: units burnt clay, concrete blocks, mortar, grout, reinforcement; Masonry bonds and properties: patterns, shrinkage, differential movement, masonry properties compression strength ; Stresses in masonry walls: vertical loads, vertical loads and moments eccentricity & kern distance, lateral loads inplane, outofplane; Behaviour of masonry walls and piers: axial and flexure, axial shear and flexure, Behaviour of Masonry Buildings: unreinforced masonry buildings importance of bands and corner & vertical reinforcement, reinforced masonry buildings cyclic loading & ductility of masonry walls; Behaviour of masonry infills in RC frames: strut action; Structural design of masonry in buildings: methods of design WSD, USD, seismic design seismic loads, code provisions, infills, connectors, ties; Seismic evaluation and strengthening of masonry buildings: methods insitu, non-destructive testing; Construction practices and new materials.