Abbreviations

ACI	American Concrete Institute
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
BFRP	Basalt Fiber Reinforced Polymer
BS	British Standard
CDP	Concrete-damaged Plasticity
CFRP	Carbon Fiber Reinforced Polymer
CSA	Canadian Standards Association
CTM	Compression Testing Machine
DFRCC	Ductile Fiber Reinforced Cementitious Composite
ECC	Engineer Cementitious Composite
FE	Finite Element
FEMA	Federal Emergency Management Agency
FRC	Fiber Reinforced Concrete
FRP	Fiber Reinforced Polymer
GFRP	Glass Fiber Reinforced Polymer
HPRCC	High Performance Fiber Reinforced Cementitious Composites
IS	Indian Standard
ISIS	Intelligent Sensing for Innovative Structures
JSCE	Japan Society Of Civil Engineers
NSM	Near Surface Mounted
NZS	New Zealand Standard
PE	Polyethylene
PPC	Portland Pozzolana Cement
PPD-T	Polypara-Phenylene- Terephthalamide
POLY	Polyester
PVA	Polyvinyl Alcohol
RC	Reinforced Concrete

TRM	Textile-Reinforced Mortars
URM	Unreinforced Masonry
UTM	Universal Testing Machine
WWF	Welded Wire Fabric
A_1	Area of left side joint
A_2	Area of right side joint
D	Maximum deflection of the axis of the beam, mm
E_b	Modulus of elasticity of brick
E_{bn}	Modulus of elasticity in bending, MPa
E_c	Chord modulus of elasticity, MPa
E_m	Modulus of elasticity of masonry prism
F_{bs}	Flexural bond strength (MPa)
K_c	Ratio of the second stress invariant on the tensile meridian to that on the compressive meridian at initial yield for any given value of the pressure invariant
K_{nn}	Normal stiffness
K_{ss}	Shear stiffness in first direction
K_{tt}	Shear stiffness in second direction
L	Span of the specimen
L_s	Support span
L_1	Distance from center of prism to loading point (mm)
L_2	Distance from center of prism to centroid of loading arm (mm)
M	Maximum bending moment
P	Maximum applied load (N)
P_{SB}	Load carrying capacity of strengthened/reinforced masonry beam
P_{CB}	Load carrying capacity of respective control masonry beam
P_u	Axial load carrying capacity
P_{us}	Load carrying capacity of strengthened wall
P_{uc}	Load carrying capacity of unstrengthened/control wall
$P_{u, exp}$	Experimental load carrying capacity
$P_{u,anl}$	Analytical load carrying capacity

P_1	Weight of loading arm (N)
R^2	Coefficient of determination
S_1	Stress corresponding to a longitudinal strain (ε_1), MPa
S_2	Stress corresponding to 40 % of ultimate load, MPa
b	Width of the specimen
b_c	Cross-sectional width of the mortar-bedded area
d	Depth of the specimen
d_c	Uniaxial damage variables for compression
d_m	Cross-sectional depth of the mortar-bedded area
d_t	Uniaxial damage variables for tension
f_b	Compressive strength of brick
f_{bo}/f_{co}	Ratio of the initial biaxial compressive yield stress to initial uniaxial compressive yield stress
f_{ct}	Split tensile strength
f_j	Compressive strength of mortar
f_m	Compressive strength of masonry prism
f_{MC}	Compressive strength of confined masonry
f_{MO}	Compressive strength of unconfined masonry
f_{mcd}	Design compressive strength of confined column
f_{md}	Compressive strength of unconfined column
f_l	Lateral confining pressure
$f_{l,eff}$	Effective lateral confining pressure
h	Total depth of the strengthened specimens
k_1	Empirical constant
k'	Dimensionless confinement coefficient
l	Length of the specimen
m	Slope of the tangent to the initial portion of the load deflection curve, N/mm
t	Nominal traction stress vector
w_{max}	Maximum mid-span deflection of the specimen
α	Empirical constant
α^1	Dimensionless coefficients

σ_f	Flexural stress, MPa
σ_C	Compressive strength
σ_{lu}	Confining stress at failure
ε	Eccentricity
ε_c	Total compressive strain
$\tilde{\varepsilon}_c^{in}$	Inelastic or crushing strain
$\tilde{\varepsilon}_c^{pl}$	Plastic strains in compression
ε_{oc}^{el}	Elastic strain corresponding to the undamaged material
$\tilde{\varepsilon}_t^{ck}$	Cracking strain
ε_t	Total tensile strain
ε_{ot}^{el}	Elastic strain corresponding to the undamaged material
$\tilde{\varepsilon}_t^{pl}$	Plastic strains in tension
ε_{fo}	Flexural strain in the outer surface, mm/mm
ε_{t1}	Transvers strain at mid-height of the specimens produced by stress S_1, mm/mm
ε_{t2}	Transvers strain at mid-height of the specimens produced by stress S_2, mm/mm
ε_1	3.45E-7 (longitudinal strain in mm/mm)
ε_2	Longitudinal strain produced by stress S_2, mm/mm
τ_{bs}	Shear bond strength of the masonry
μ	Poisson's ratio
μ_v	Viscosity parameters
δ_s	Mid-span displacement of strengthened wall
δ_u	Mid-span displacement of unstrengthened/control wall
δ_{SB}	Mid-span deflection of strengthened/reinforced masonry beam
δ_{CB}	Mid-span displacement of respective control masonry beam
ψ	Dilation angle