the y earthquake direction considered

 $M_{\rm t}$  = Total mass of building  $(M_{\rm t} = W_{\rm t}/g)$ 

 $M_{\rm U,Rd,b}$  = Upper bound plastic resistance of beam, computed taking into account the concrete component of the section and all the steel components in the section, including those not classified as ductile

 $M_{\rm Y}$  = Bending moment corresponding to the state of first-yield in RC section

 $m_{\rm e}$  = Nonstructural element mass

Total number of stories of building from the foundation level
(In buildings with rigid peripheral basement walls, total number of stories from the ground floor level)

 $N_{\rm Ed}$  = Design axial force obtained from analysis for the seismic design situation

 $N_{\rm Ed,E}$  = Axial force due to design seismic action

 $N_{\rm Ed,G}$  = Axial force due to non-seismic actions in seismic design situation

 $N_{\rm pl,Rd}$  = Design value of yield resistance in tension of the gross cross-section of a member in accordance with EN 1993-1-1:2004

*n* = Steel-to-concrete modular ratio for short term actions

 $n_1$  = Live Load Mass Reduction Factor

 $n_2$  = Live Load Participation Factor

 $Q_{Cx}$  = Response quantity obtained by modal combination in Response Spectrum Method for an earthquake in x direction

 $Q_{\text{Cy}}$  = Response quantity obtained by modal combination in Response Spectrum Method for an earthquake in y direction

 $Q_{\rm D}$  = Design response quantity due to seismic action

 $Q_i$  = Total live load at i'th storey of building

 $Q_{Sx}$  = Scaled response quantity obtained by modal combination in Response Spectrum Method for an earthquake in x direction

 $Q_{Sy}$  = Scaled response quantity obtained by modal combination in Response Spectrum Method for an earthquake in y direction

 $Q_{\rm x}$  = Response quantity obtained in Equivalent Seismic Load Method for an earthquake in x direction

 $Q_y$  = Response quantity obtained in Equivalent Seismic Load Method for an earthquake in y direction

q = Behaviour Factor

 $q_e$  = Behaviour Factor for nonstructural element or component

 $q_{\rm R}(T)$  = Seismic Load Reduction Factor

 $R_d$  = Design resistance of an element; resistance of connection in accordance with EN 1993-1-1:2004

 $R_{\rm di}$  = Design resistance of the zone or element i

 $R_{\rm fy}$  = Plastic resistance of connected dissipative member based on design yield strength of material as defined in EN 1993-1-1:2004

 $S_{AE}(T)$  = Elastic spectral acceleration [m/s<sup>2</sup>]

 $S_{AR}(T)$  = Design (reduced) spectral acceleration [m/s<sup>2</sup>]

 $S_{SD}$  = Short period (0.2 second) elastic spectral acceleration [m/s<sup>2</sup>]

 $S_{1D}$  = 1.0 second elastic spectral acceleration [m/s<sup>2</sup>]  $S_{1D}$  = Spacing of transverse reinforcement [mm]

T = Natural period of vibration [s]

 $T_{\rm L}$  = Transition period of response spectrum to long-period range [s]

 $T_{\rm o}$  = Response spectrum short corner period [s]  $T_{\rm S}$  = Response spectrum long corner period [s]

 $T_1$  = Natural period of predominant mode (first mode) [s]