4.4.3.3 – In frames with V bracings, the non-dimensional slenderness $\bar{\lambda}$ should be less than or equal to 2.0.

4.4.3.4 – In structures of up to two storeys, no limitation applies to $\bar{\lambda}$.

4.4.3.5 – Yield resistance $N_{pl,Rd}$ of the gross cross-section of the diagonals should be such that $N_{pl,Rd} \geq N_{Ed}$.

4.4.3.6 – In frames with V bracings, the compression diagonals should be designed for the compression resistance in accordance with EN 1993.

4.4.3.7 – The connections of the diagonals to any member should satisfy the design rules of **4.2.3**.

4.4.3.8 – In order to satisfy a homogeneous dissipative behaviour of the diagonals, it should be checked that the maximum overstrength Ω_i defined in **4.4.4.1** does not differ from the minimum value Ω by more than 25%.

4.4.3.9 – Energy dissipating semi-rigid and/or partial strength connections are permitted, provided that all of the following conditions are satisfied:

(a) Connections have an elongation capacity consistent with global deformations;

(b) Effect of connections deformation on global drift is taken into account using nonlinear static (pushover) global analysis or non-linear time history analysis.

4.4.4 Beams and columns

4.4.4.1 – Beams and columns with axial forces should meet the following minimum resistance requirement:

$$N_{pl,Rd}(M_{Ed}) \geq N_{Ed,G} + 1.1\,\gamma_{ov}\,\Omega\,N_{Ed,E} \qquad \textbf{(4.11)}$$

where $N_{pl,Rd}(M_{Ed})$ is the design buckling resistance of the beam or the column in accordance with EN 1993, taking into account the interaction of the buckling resistance with the bending moment M_{Ed} , defined as its design value in the seismic design situation; $N_{Ed,G}$ is the axial force in the beam or in the column due to the non-seismic actions included in the combination of actions for the seismic design situation; $N_{Ed,E}$ is the axial force in the beam or in the column due to the design seismic action; γ_{ov} is the overstrength factor, Ω is the minimum value of $\Omega_i = N_{pl,Rd,i} / N_{Ed,i}$ over all the diagonals of the braced frame system; where $N_{pl,Rd,i}$ is the design resistance of diagonal *i*; $N_{Ed,i}$ is the design value of the axial force in the same diagonal *i* in the seismic design situation.

4.4.4.2 – In frames with V bracings, the beams should be designed to resist:

(a) all non-seismic actions without considering the intermediate support given by the diagonals;

(b) unbalanced vertical seismic action effect applied to the beam by the braces after buckling of the compression diagonal. This action effect is calculated using $N_{pl,Rd}$ for the brace in tension and $\gamma_{pb}\,N_{pl,Rd}$ for the brace in compression (The factor γ_{pb} is used for the estimation of the post buckling resistance of diagonals in compression, which may be taken as 0.3).