5.4.1.8 – The resistance, including shear resistance, of non-dissipative composite columns should be determined in accordance with the rules of EN 1994-1-1:2004.

5.4.1.9 – In columns, when the concrete encasement or infill are assumed to contribute to the axial and/or flexural resistance of the member, the design rules in **5.4.4** to **5.4.6** apply. These rules ensure full shear transfer between the concrete and the steel parts in a section and protect the dissipative zones against premature inelastic failure.

5.4.1.10 – For earthquake-resistant design, the design shear strength given in EN 1994-1-1:2004, Table 6.6, should be multiplied by a reduction factor of 0.5.

5.4.1.11 – When, for capacity design purposes, the full composite resistance of a column is employed, complete shear transfer between the steel and reinforced concrete parts should be ensured. If insufficient shear transfer is achieved through bond and friction, shear connectors should be provided to ensure full composite action.

5.4.1.12 – Wherever a composite column is subjected to predominately axial forces, sufficient shear transfer should be provided to ensure that the steel and concrete parts share the loads applied to the column at connections to beams and bracing members.

5.4.1.13 – Except at their base in some structural types, columns are generally not designed to be dissipative. However, because of uncertainties in the behaviour, confining reinforcement is required in regions called *critical regions* as specified in **5.4.4**.

5.4.1.14 – 3.5.2.1 and **3.5.3** concerning anchorage and splices in the design of reinforced concrete columns apply also to the reinforcements of composite columns.

5.4.2. Steel beams composite with slab

5.4.2.1 – The design objective of this subclause is to maintain the integrity of the concrete slab during the seismic event, while yielding takes place in the bottom part of the steel section and/or in the rebars of the slab.

5.4.2.2 – If it is not intended to take advantage of the composite character of the beam section for energy dissipation, **5.5.5** shall be applied.

5.4.2.3 – Beams intended to behave as composite elements in dissipative zones of the earthquake resistant structure may be designed for full or partial shear connection in accordance with EN 1994-1-1:2004. The minimum degree of connection η as defined in EN 1994-1-1:2004 **6.6.1.2** should be not less than 0.8 and the total resistance of the shear connectors within any hogging moment region not less than the plastic resistance of the reinforcement.

5.4.2.4 – The design resistance of connectors in dissipative zones is obtained from the design resistance provided in EN 1994-1-1:2004 multiplied by a reduction factor of 0.75.

5.4.2.5 – Full shear connection is required when non-ductile connectors are used.

5.4.2.6 – When a profiled steel sheeting with ribs transverse to the supporting beams is used, the reduction factor k_t of the design shear resistance of connectors given by EN 1994-1-1