$\sigma_{c,adm,\perp}$ = permissible bearing stress

$= \sigma_{c,g,\perp} * K_2 * K_3 * K_8 * K_{18}$

$\sigma_{c,g,\perp}$ = grade stress (for bearing OR compression) perpendicular to grain

(Table 8)

K_{18} = factor for compression (or bearing) $\perp r$ to grain

(Table 24)

4) Deflection criteria

$$\delta_{actual} \leq 0.003 * span$$

δ_{actual} = Actual deflection

$= \delta_{bending} + \delta_{shear}$

$\delta_{bending}$ = deflection due to bending

δ_{shear} = deflection due to shear

$= \frac{M}{A \cdot G}$ ← M = max^m applied bending moment; G ← Shear modulus

$G = E/16$ can be assumed