Flange Local Buckling Limit State Summary

SCM Section	M_p	M_r	M_n, Inelastic Range $\lambda_p < \lambda \leq \lambda_r$	M_n, Elastic Range $\lambda_r < \lambda$
F3	$F_y Z_x$	$0.70 F_y S_x$	$\text{Min}[M_p - (M_p - M_r)(\lambda-\lambda_p)/(\lambda_r-\lambda_p), M_p]$	$0.9 E k_c S_{xc} / \lambda^2$
F4	$R_{pc} F_y S_{xc}$	$F_L S_{xc}$		
F5	$R_{pc} F_y S_{xc}$	$R_{pc}(0.7F_y)S_y$		$R_{pc} 0.9 E k_c S_{xc} / \lambda^2$
F6	$\text{Min}(F_y Z_y, 1.6 F_y S_y)$	$0.70 F_y S_y$		$0.69 E S_y / \lambda^2$
F7	$F_y Z$	$F_y S$	$\min\left(M_p - (M_p - M_r)\left(3.57\lambda\sqrt{\frac{F_y}{E}} - 4.0\right), M_p\right)$	$F_y S_{eff}$
F9	----	----	$\min\left(F_y\left(1.19 - 0.50\lambda\sqrt{\frac{F_y}{E}}\right), F_y\right) S_{xc}$	$0.69 E S_{xc} / \lambda^2$

Where: λ = flange width/thickness ratio (b/t, see SCM Table B4.1)
λ_p = Compact limit (see SCM Table B4.1)
λ_r = Non-compact limit (see SCM Table B4.1)