

(4-8)-(4-19)

$$\Gamma \leq 0.438/\sqrt{\beta_1}$$

$$f_c = \beta_1 \frac{F}{1.5} \quad (4-11)$$

$$0.438/\sqrt{\beta_1} < \Gamma \leq 0.876/\sqrt{\beta_1}$$

$$f_c = \beta_1 \left(1 - 0.5 \frac{\Gamma - 0.438/\sqrt{\beta_1}}{0.876/\sqrt{\beta_1} - 0.438/\sqrt{\beta_1}} \right) \frac{F}{1.5} \quad (4-12)$$

$$0.876/\sqrt{\beta_1} < \Gamma$$

$$f_c = \frac{0.256}{\Gamma^2} F \quad (4-13)$$

(4-17)~(4-19)

$$\Gamma_d \leq 1.35/\sqrt{\beta_1}$$

$$f_c = \beta_1 \frac{F}{1.5} \quad (4-20)$$

$$1.35/\sqrt{\beta_1} < \Gamma_d \leq 2.69/\sqrt{\beta_1}$$

$$f_c = \beta_1 \left(1 - 0.5 \frac{\Gamma_d - 1.35/\sqrt{\beta_1}}{2.69/\sqrt{\beta_1} - 1.35/\sqrt{\beta_1}} \right) \frac{F}{1.5} \quad (4-21)$$

$$2.69/\sqrt{\beta_1} < \Gamma_d$$

$$f_c = \frac{2.41}{\Gamma_d^2} F \quad (4-22)$$