

$$dx1 := A_1 = 220 \text{ mm}$$

$$dx2 := 3 \ A_1 = 660 \text{ mm}$$

$$d xp := dx1, dx1 + \frac{dx2 - dx1}{50} .. dx2$$

$$f(d xp) := \frac{\text{interp}\left(y_S, x, y, \frac{d_c}{A_1}\right)}{s_1 \cdot \langle A_1 - d_c \rangle} - \frac{\text{interp}\left(y_S, x, y, \frac{d_c}{d xp}\right)}{s_2 \cdot \langle d xp - d_c \rangle}$$

$$dxs := \text{root}(f(d xp), d xp, dx1, dx2) = 270.561 \text{ mm}$$

$$\sigma_l := \frac{G_u + G_g + G_i}{4 \cdot s_1 \cdot \langle A_1 - d_c \rangle} = 3.463 \frac{\text{kgf}}{\text{mm}^2}$$

$$\sigma_p := \frac{G_u + G_g + G_i}{4 \cdot s_2 \cdot \langle d xs - d_c \rangle} = 3.067 \frac{\text{kgf}}{\text{mm}^2}$$

$$kt_l := \text{interp}\left(y_S, x, y, \frac{d_c}{A_1}\right) = 2.46$$

$$kt_p := \text{interp}\left(y_S, x, y, \frac{d_c}{d xs}\right) = 2.777$$

$$\sigma_{lmax} := kt_l \cdot \sigma_l = 8.517 \frac{\text{kgf}}{\text{mm}^2}$$

$$\sigma_{pmax} := kt_p \cdot \sigma_p = 8.517 \frac{\text{kgf}}{\text{mm}^2}$$