

$$a := s_1 + s_2 = 70 \text{ mm}$$

$$B_t := 245 \text{ mm}$$

$$d_2 := 130 \text{ mm}$$

$$c := \frac{B_t + d_2}{2} = 187.5 \text{ mm}$$

$$T := 84 \text{ mm}$$

$$b := \frac{3 \cdot T + 5 \text{ mm} - c}{2} = 34.75 \text{ mm}$$

$$I := 3 \cdot T + 5 \text{ mm} + 2 \cdot a = 397 \text{ mm}$$

$$q := \frac{G_u + G_g + G_i}{c} = 295.504 \frac{\text{kgf}}{\text{mm}}$$

$$q_p := \frac{G_u + G_g + G_i}{2 a} = 395.764 \frac{\text{kgf}}{\text{mm}}$$

$$M_{CC} := q_p \cdot \frac{a^2}{2} = 969622.5 \text{ kgf} \cdot \text{mm}$$

$$M_{BB} := -q \cdot \frac{c^2}{8} + a \cdot q_p \cdot \left(\frac{c}{2} + b + \frac{a}{2} \right) = 3230920.688 \text{ kgf} \cdot \text{mm}$$

$$T_{CC} := q_p \cdot a = 27703.5 \text{ kgf}$$

$$s := \frac{\langle A_t - d_f \rangle}{2}$$

$$J_{XX} := 2 \cdot \frac{s \cdot H_t^3}{12} = 46686250 \text{ mm}^4$$

$$\sigma_{maxBB} := \frac{M_{BB}}{\frac{J_{XX}}{\frac{H_t}{2}}} = 4.498 \frac{\text{kgf}}{\text{mm}^2}$$

$$\sigma_{maxCC} := \frac{M_{CC}}{\pi \cdot \frac{d_t^3}{32}} = 8.532 \frac{\text{kgf}}{\text{mm}^2}$$

$$\tau_{maxCC} := \frac{4}{3} \frac{T_{CC}}{\pi \cdot \frac{d_t^2}{4}} = 4.266 \frac{\text{kgf}}{\text{mm}^2}$$