$$G_u \coloneqq 55000 \; extbf{kgf}$$
 $G_i \coloneqq 227 \; extbf{kgf}$
 $G_g \coloneqq 180 \; extbf{kgf}$

 $S_1 := S_1 \cdot (A_1 - d_t) = 2875 \ mm^2$

 $\sigma := \frac{G_u + G_g + G_i}{2 \cdot S_1} = 9.636 \frac{\mathbf{kgf}}{\mathbf{mm}^2}$