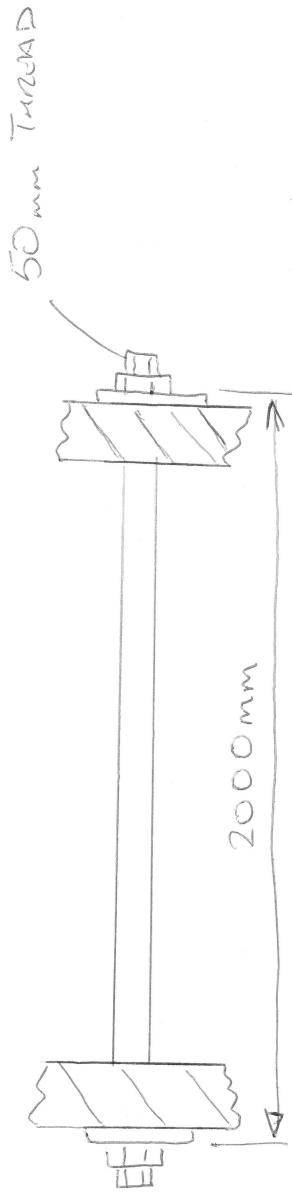


①

← 1000N →



$$T_{\text{torque}} = \frac{1000 \times 0.2}{50 \text{ mm}} = 4 \text{ Nmm}$$

where  $d = \text{Bolt DIA}$

$\mu = \text{Friction Factor}$

0.2 FOR DRY THREADS

②

IF YOU USE BOLT ELONGATION YOU DON'T SPECIFY TORQUE JUST THE PRELOAD ALTHOUGH YOU CAN SPECIFY THE BOLT STRETCH

A 50mm THREAD IS A NON-PRELOADED SIZE SO I'LL GUESS A MINOR DIA OF 48mm

$$E = \frac{\text{STRESS}}{\text{STRAIN}}$$

$$\therefore \sigma = \frac{\text{STRESS} \times L}{E} = \frac{1000 \times 4}{48^2 \pi} \times 2000$$

$$\frac{200 \times 10^3}{200 \times 10^3}$$

$$\text{BOLT STRETCH} = 5.5262 \times 10^{-3} \text{ mm}$$