

CALCULATION SHEET

JOB No.
DATE:

Calculate Shear Stress on M24 Bars,
if an e-stop occurred.

Spindle nose details.

Mass

$$I = \text{Moment of inertia} = 7,352 \text{ m/kg}^2$$

$$Rpm = 3300 \text{ rpm}$$

$$\text{Deceleration} =$$

$$Rpm = Rad/s =$$

$$\frac{Rpm}{60} \times 2\pi = \frac{3300}{60} \times 2\pi =$$

$$\therefore \omega = 345,6 \text{ Rad/s} \quad 99 \times 2\pi = \underline{\underline{345,6 \text{ Rad/s}}}$$

Angular Velocity

Kinetic energy.

$$KE = \frac{I \omega^2}{2} = \frac{7,352 \times 345,6^2}{2}$$

$$= \underline{\underline{439059,1 \text{ Joules}}}$$