$\hat{p} = \sqrt{[2cFE^*/\pi dt]} \le \frac{200}{0.6}$ MPa

– i.e. max. equiv. stress $= 0.6\hat{p} \le$ design stress of weaker material (Both ductile here).

$\therefore dt \ge (0.6/200)^2 \times \frac{2 \times 0.01 \times 6 \times 10^3 \times 113 \times 10^3}{\pi} = 3.9\ mm^2$

$\quad \frac{mm^4}{N^2} \qquad N \qquad \frac{N}{mm^2}$

Summary –

To avoid failure, due to the mechanisms which have been considered (& these are not the whole story)! :

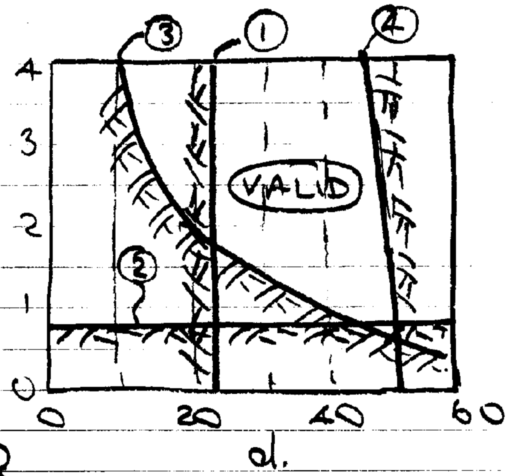
1. $d \ge 21.7$ mm
2. $t \ge 0.76$ mm
3. $td \ge 3.9\ mm^2$

and of course there's the geometric necessity that

$d \le D - t$ to avoid 

4. $d + t \le 50$

and in practice would be a lot less.



So a valid region in t-d space results as shown – any combination in it is OK. Choose combination which is available off-the-shelf – say $t = 2$mm $d = 25$mm.

If the clearance were to increase five-fold so would the product dt above !!!! Need something like $d = 25$ mm, $t = 8$ mm – becoming most impractical, indicates further choice of stronger materials.