Carsten Behr Klasse: Fos T12 24.02.12

25.18 Schwingmetall-Puffer

Geg.:

|  |  |  |  |
| --- | --- | --- | --- |
|  | a) | b) | c) |
| $σ$d zul = (N/cm²) | 40 | 20 | 15 |
| $d$(mm) | 40 | 75 | 100 |

Ges.: Kraft in N

Lös.: $A=\frac{π}{4}∙d²$ ; *F = A∙ σdzul*

1. $A=\frac{π}{4}∙(4$cm)² = 12,57cm²

$F = $12,57cm² ∙ 40 N/cm² = 502,8 N

1. $A=\frac{π}{4}∙$(7,5cm)² = 44,18cm²

$F=$ 44,18cm² ∙ 20 N/cm² = 883,6 N

1. $A=\frac{π}{4}∙$ (10cm)² = 78,54cm²

$F= $ 78,54cm² $∙$ 15 N/cm² = 1.178,1 N