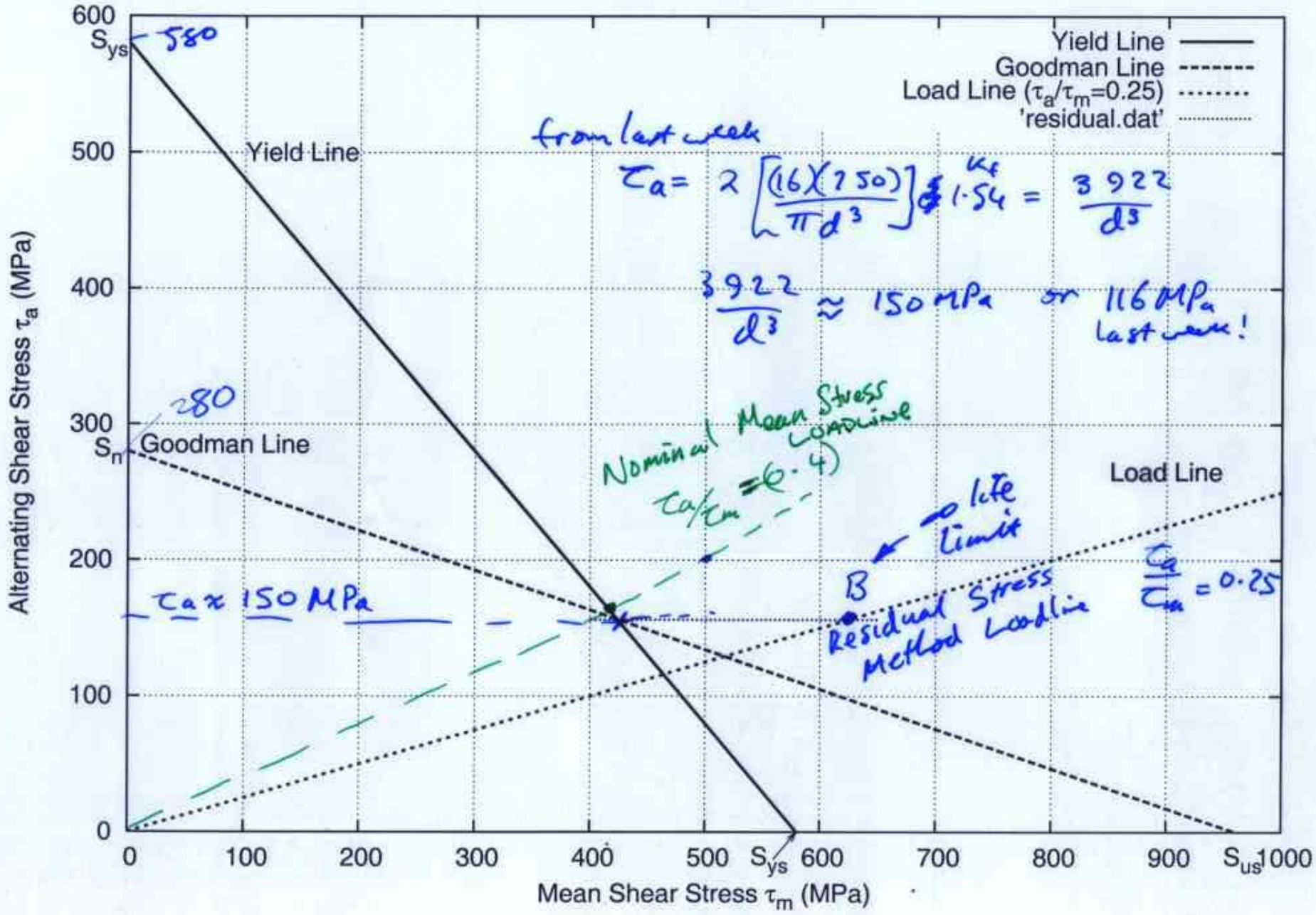
Yield Line
Goodman Line
Load Line (τ_a/τ_m=0.25)
'residual.dat'
Yield Line
Goodman Line
Load Line
S_{ys}
S_n
S_{us}
580
280
from last week
$\tau_a = 2\left[\frac{(16)(750)}{\pi d^3}\right] \cdot 1.54 = \frac{3922}{d^3}$
$\frac{3922}{d^3} \approx 150$ MPa or 116 MPa last week!
Nominal Mean Stress Loadline (τ_a/τ_m=0.4)
Life Limit
B
Residual Stress Method Loadline
$\frac{\tau_a}{\tau_m} = 0.25$
$\tau_a \approx 150$ MPa
Alternating Shear Stress τ_a (MPa)
Mean Shear Stress τ_m (MPa)
0
100
200
300
400
500
600
700
800
900
1000