ME 360 21.11.19

$$\sigma_b = \frac{W_t P d}{F J} \frac{K_a K_m}{K_v} K_s K_B K_I \quad \underline{\text{Eq } 12.15\text{us}}$$

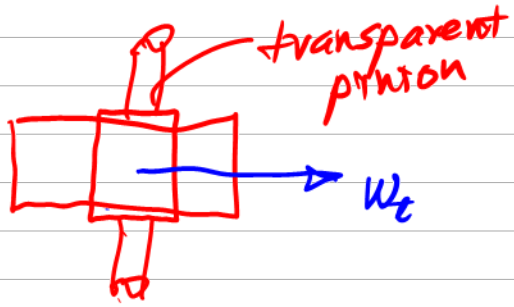
except

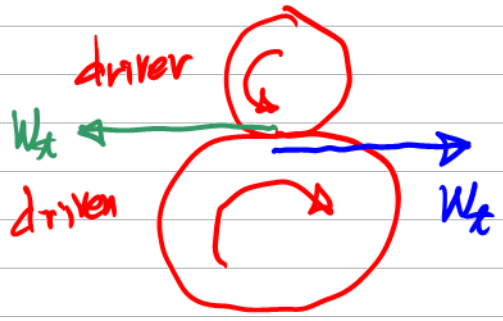
$J \neq$ polar moment inertia

$J =$ AGMA form factor Table 13-1 thru 13-

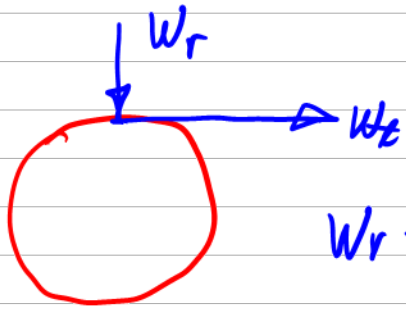
σ_c compressive surface stress

$$\sigma_c = C_p \sqrt{\frac{W_t}{F J d}} \quad \text{Eq } 12.21$$

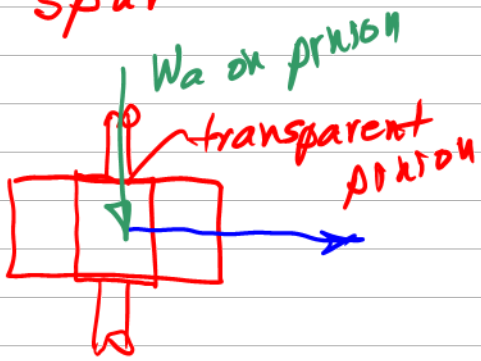


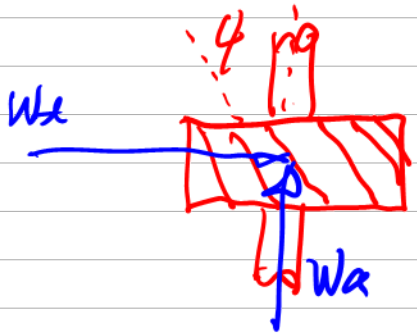


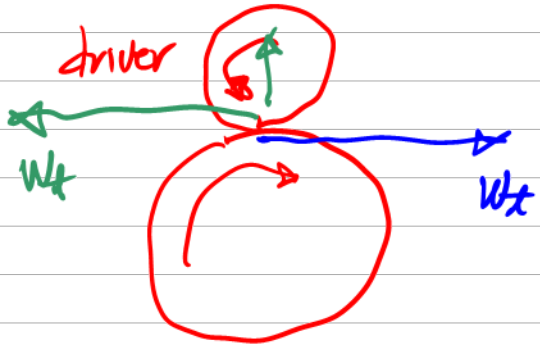
spur



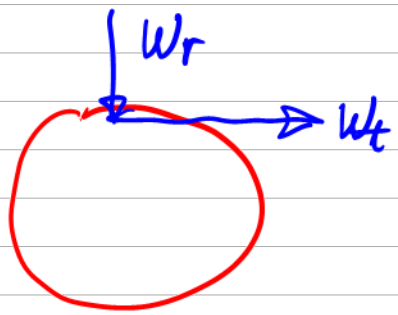
$$W_r = W_t \tan \phi$$



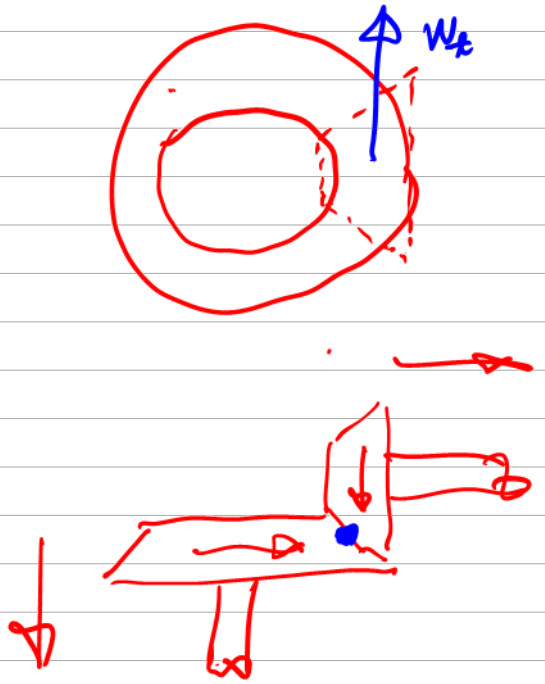




helical



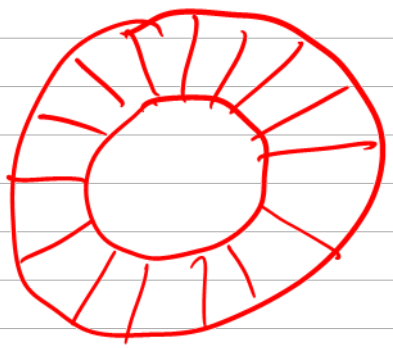
$$W_r = W_t \tan \phi$$
$$W_a = W_t \tan \psi$$

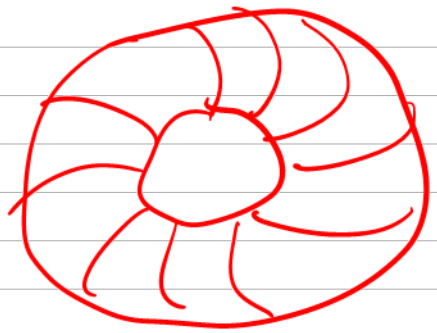


straight tooth bevel

$W_r = W_t \tan\phi \cos\alpha$

$W_a = W_t \tan\phi \sin\alpha$





Straight

$W_r =$

$W_a =$

spiral bevel ψ = helix angle

Eq 13.8b