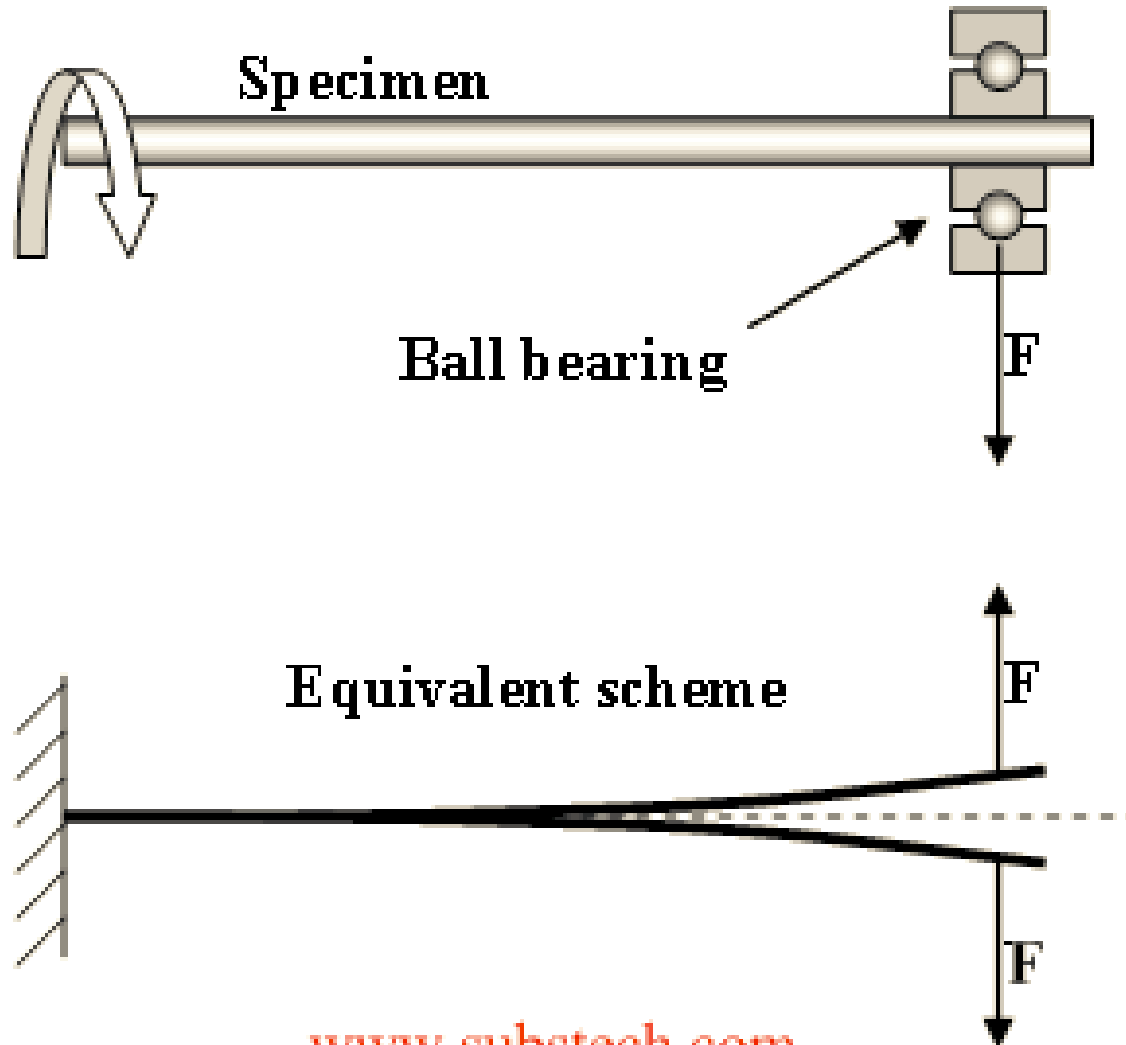
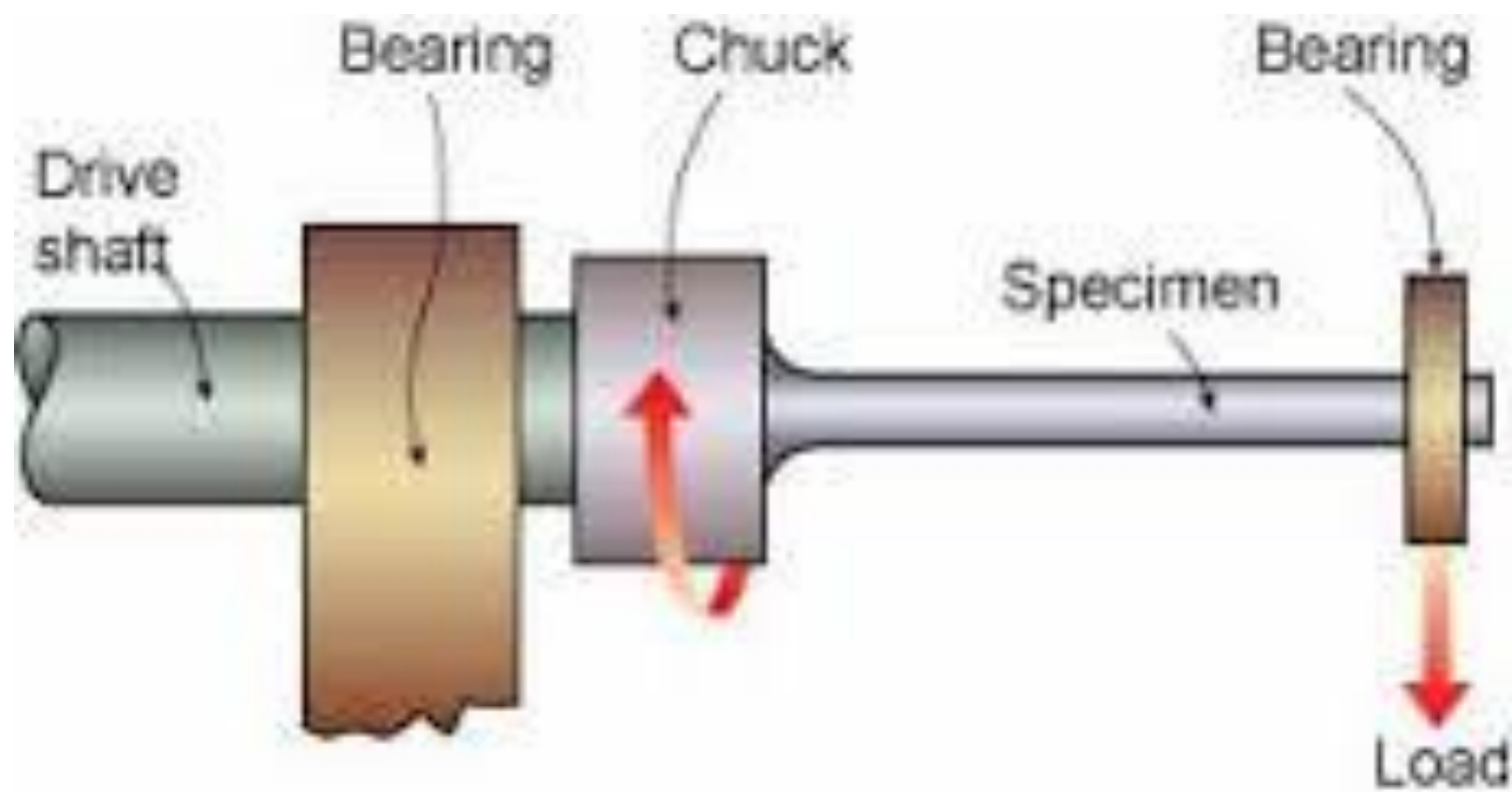


Principle of Fatigue testing Machine

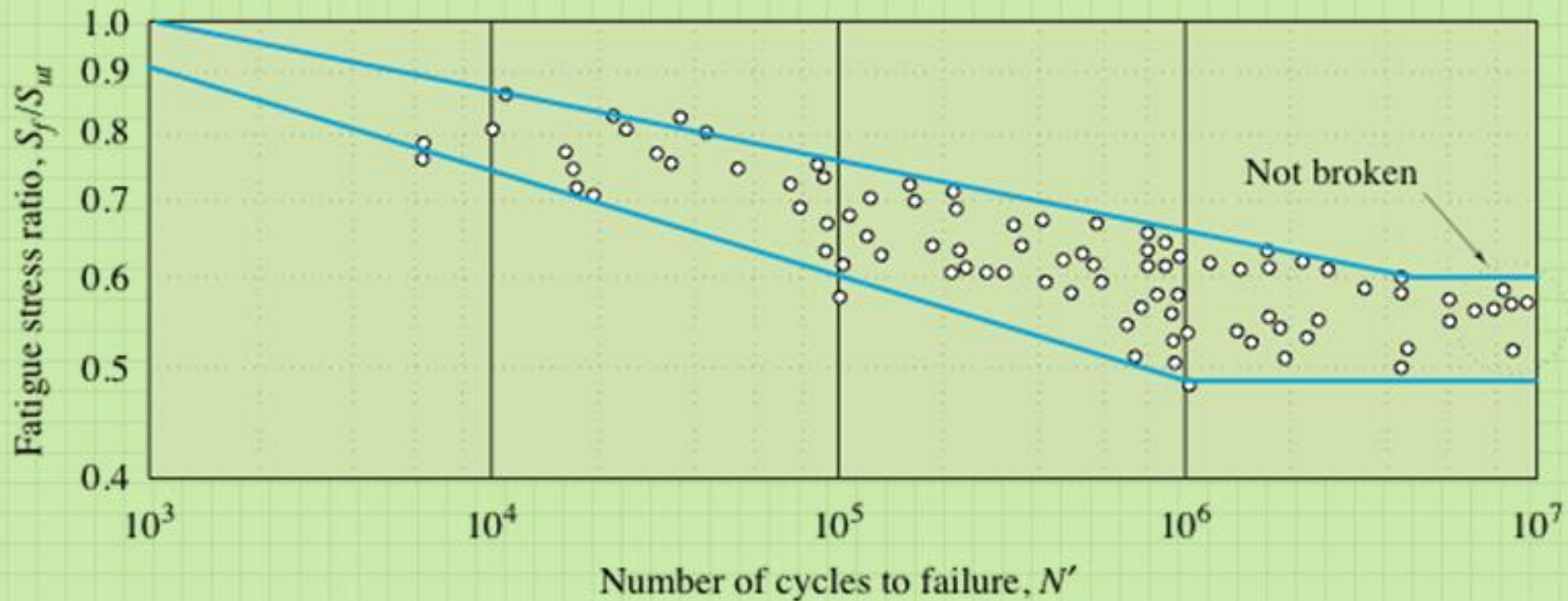




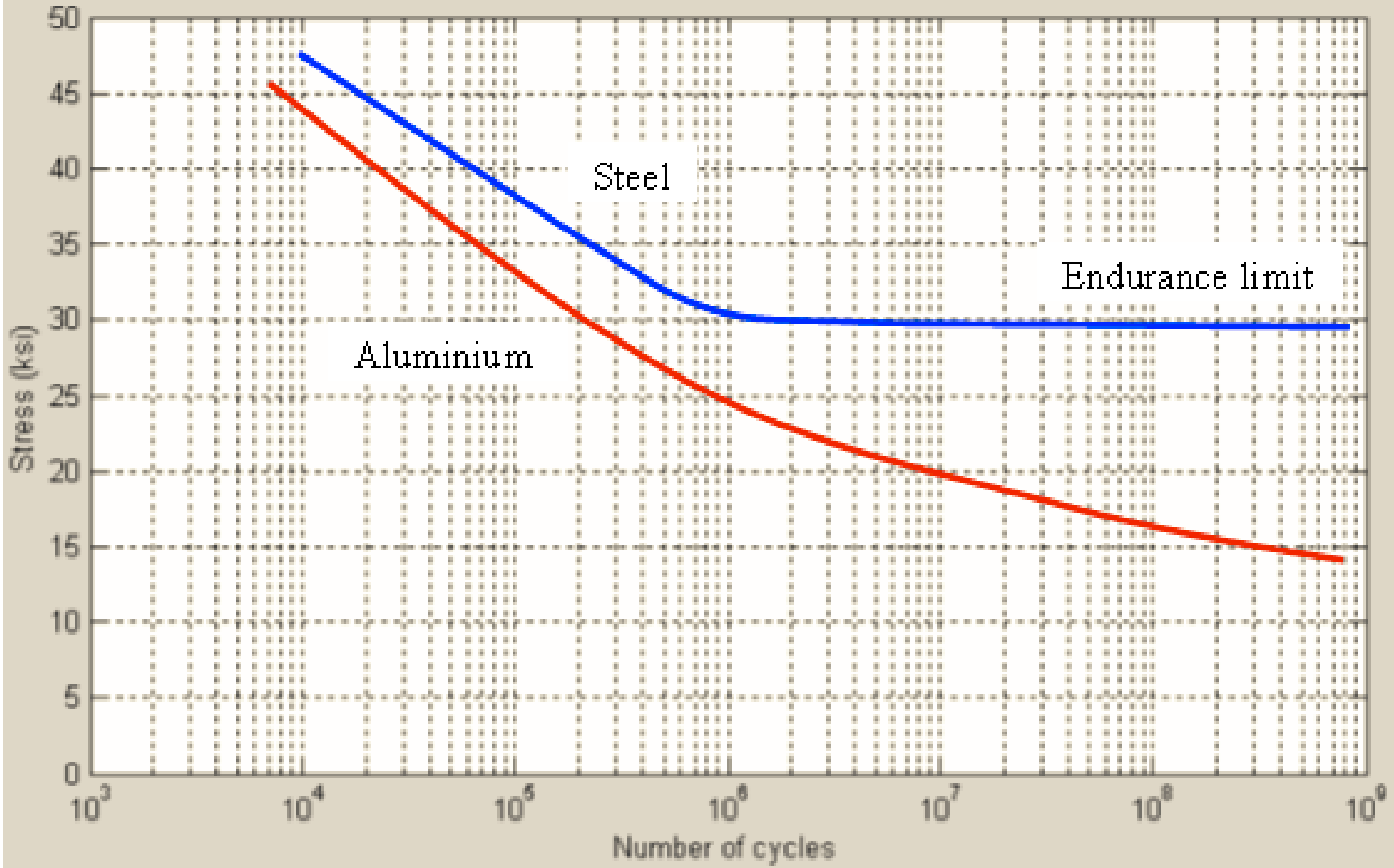




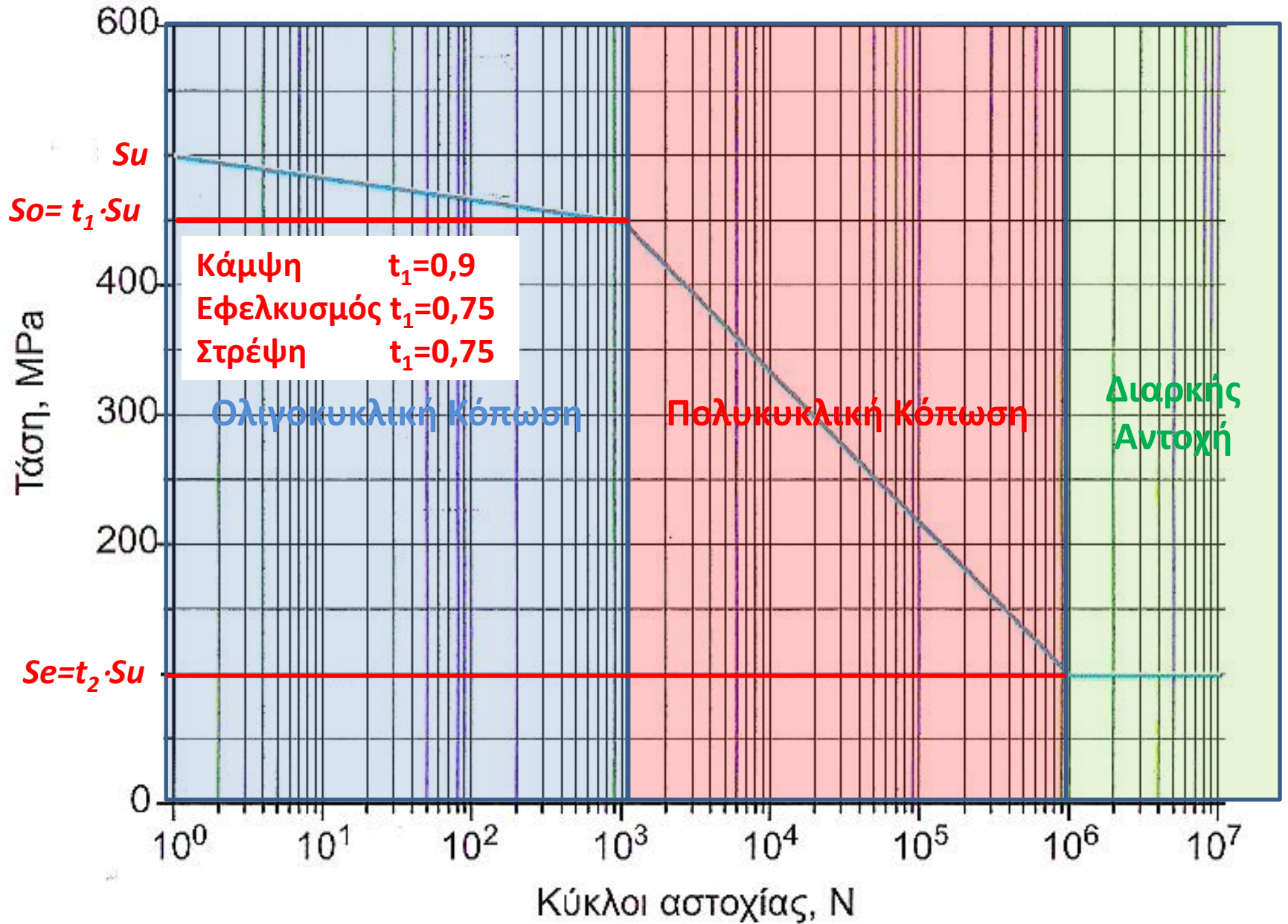
Fatigue Strength of Ferrous Metals



S-N Curve



Καμπύλη Wohler



$$S'_e = 0,5 S_u$$

for Wrought Steels where $S_u < 1400\text{mpa}$

$$S'_e = 690\text{MPa}$$

for Wrought Steels where $S_u > 1400\text{MPa}$

$$S'_e = 0,5 S_u$$

for Titanium

$$S'_e = 0,4 S_u$$

for cast steel and cast iron

$$S'_n = 0,38 S_u$$

for magnesium casting and wrought alloys (based on 10^6 cycle life)

$$S'_n = 0,35 S_u \rightarrow 0,5 S_u$$

for nickel alloys (based on 10^8 cycle life)

$$S'_n = 0,25 S_u \rightarrow 0,5 S_u$$

for copper based alloys (based on 10^8 cycle life)

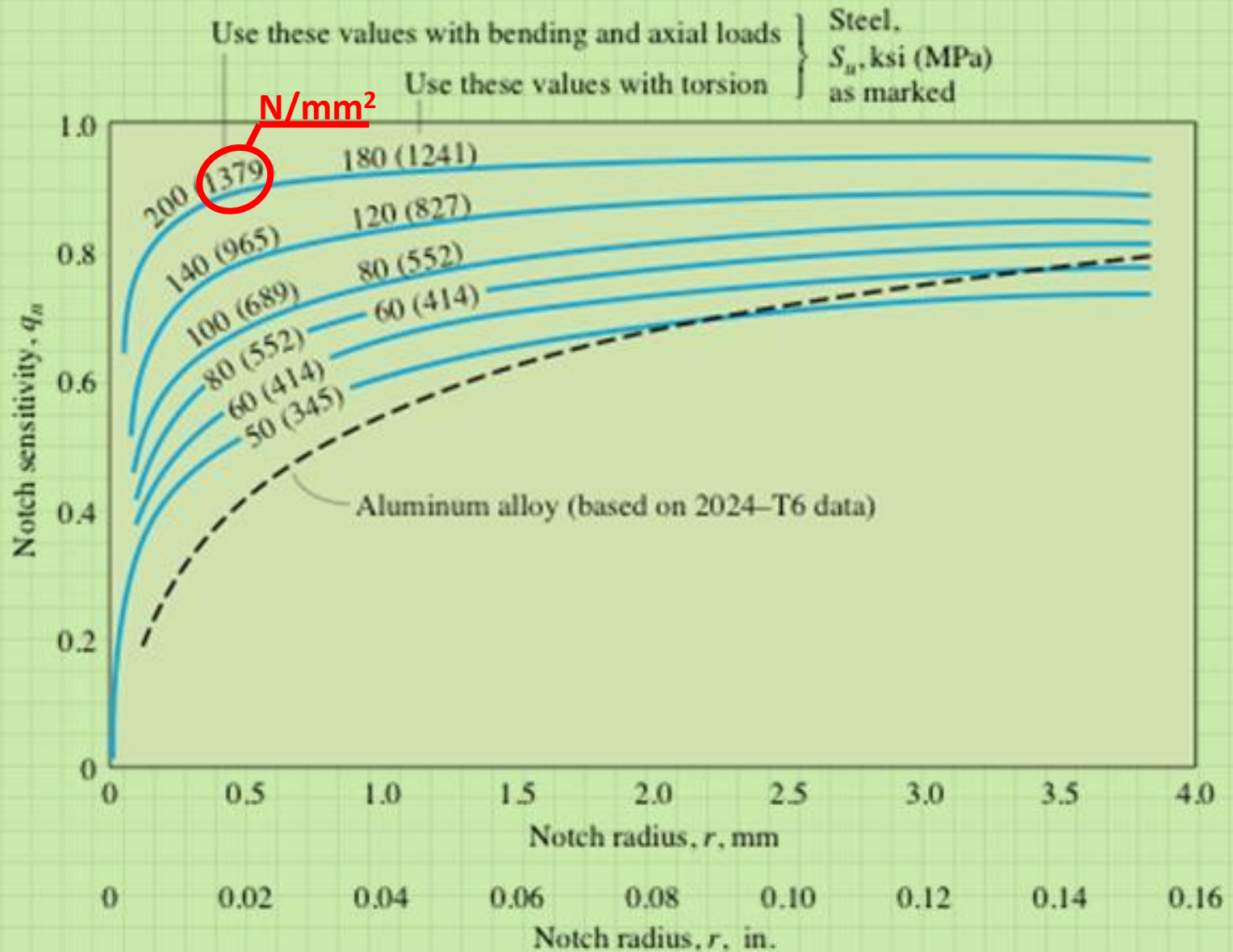
$$S'_n = 0,38 S_u$$

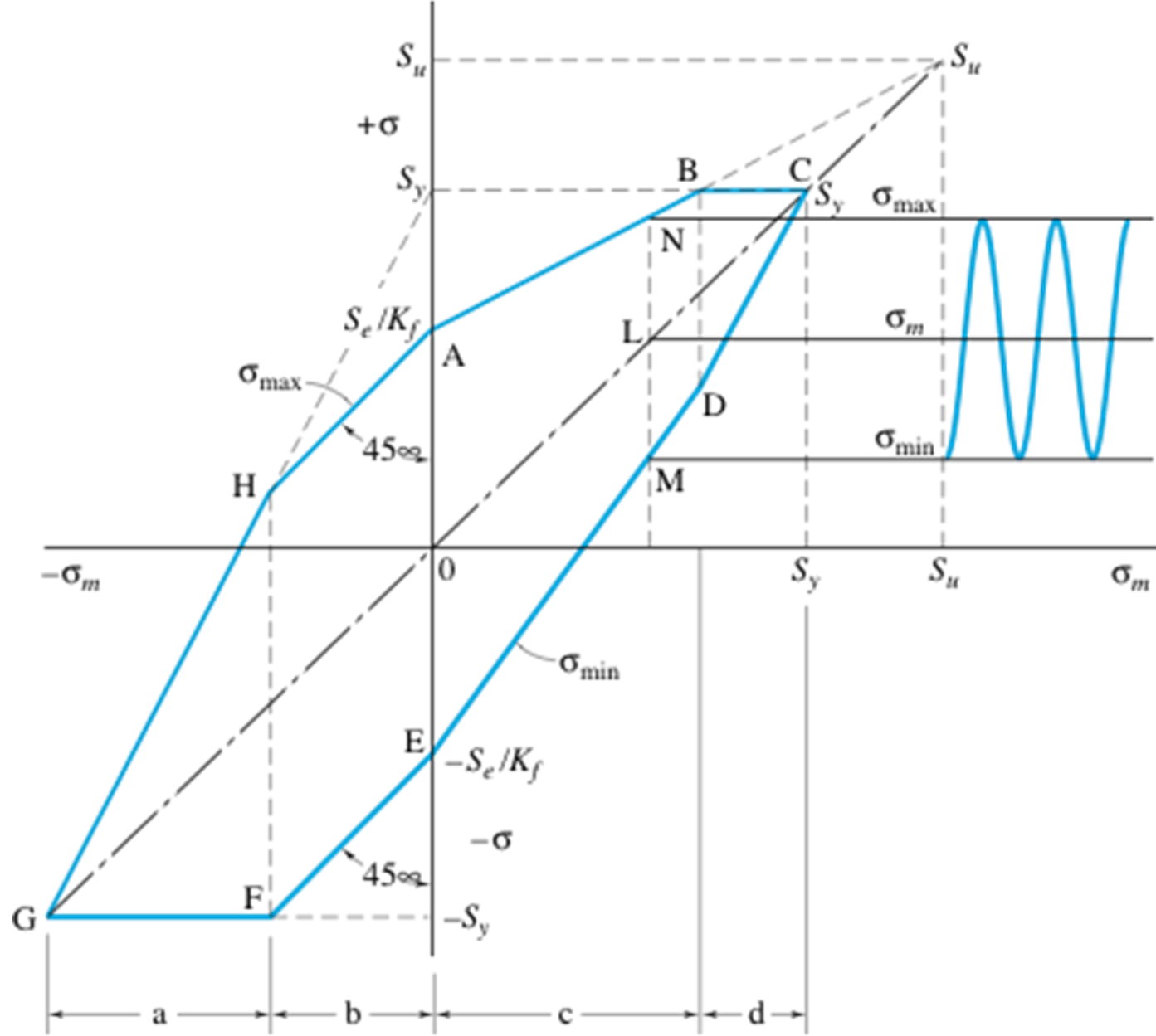
for for wrought aluminium alloys up to a strength of 280 MPa (based on 5×10^8 cycle life)

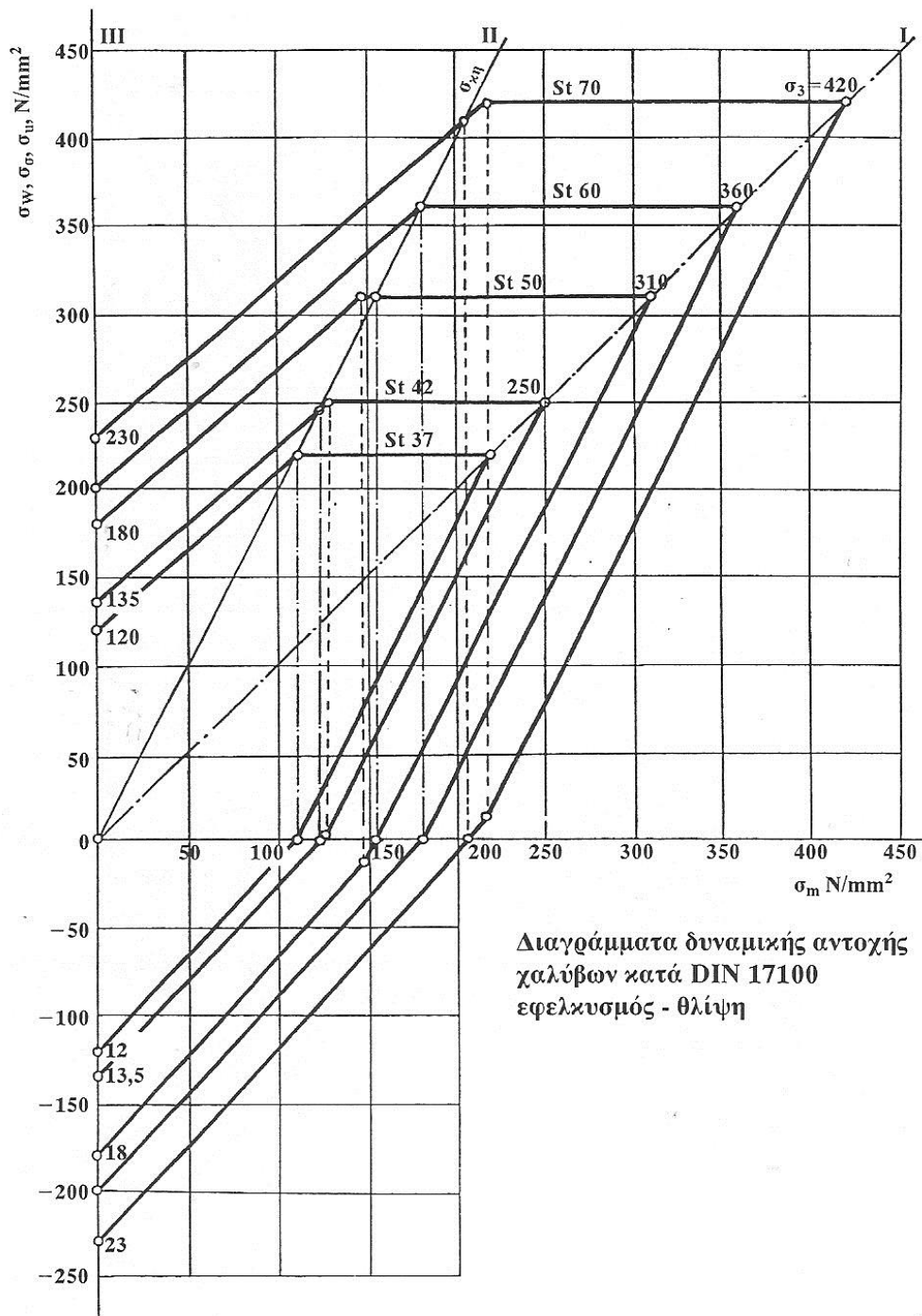
$$S'_n = 0,16 S_u$$

for for cast aluminium alloys up to a strength of 350 MPa (based on 5×10^8 cycle life)

Συντελεστής Ευαισθησίας σε εγκοπές q







Διαγράμματα δυναμικής αντοχής
 χαλύβων κατά DIN 17100
 εφελκυσμός - θλίψη

