

6.2 NORTON

ME 340

1/7/99

PAGE 1 OF 1

FIND THE UNCORRECTED ENDURANCE LIMIT AND DRAW A STRENGTH LIFE DIAGRAM (S/N), ASSUME STEEL.

$$S_e' \approx \begin{cases} 0.5 S_{ut} & S_{ut} < 200 \text{ ksi} \\ 100 \text{ ksi} & S_{ut} \geq 200 \text{ ksi} \end{cases} \quad \begin{matrix} \text{EQN 6-5a} \\ \text{pg 373} \end{matrix}$$

↑ UNCORRECTED ENDURANCE LIMIT

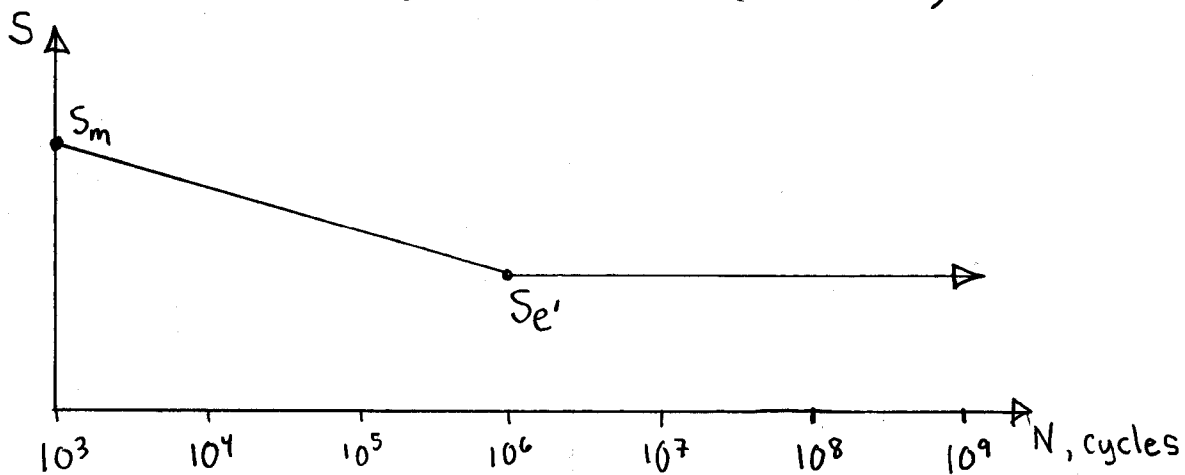
TABLE PG-2 PLUS

Row	S_{ut}	S_e'	S_{mb}	S_{ma}
a	90,000	45,000	81,000	67,500
b	250,000	100,000	225,000	187,500
c	120,000	60,000	108,000	90,000
d	150,000	75,000	135,000	112,500
e	25,000	12,500	22,500	18,750
f	70,000	35,000	63,000	52,500
g	40,000	20,000	36,000	30,000
h	35,000	17,500	31,500	26,250

FROM EQN 6.9, pg 383

$$S_m = \begin{cases} 0.9 S_{ut} & \text{BENDING} \\ 0.75 S_{ut} & \text{AXIAL} \end{cases}$$

S-N DIAGRAM (ESTIMATED)



NOTE: SEMI-LOG PLOT