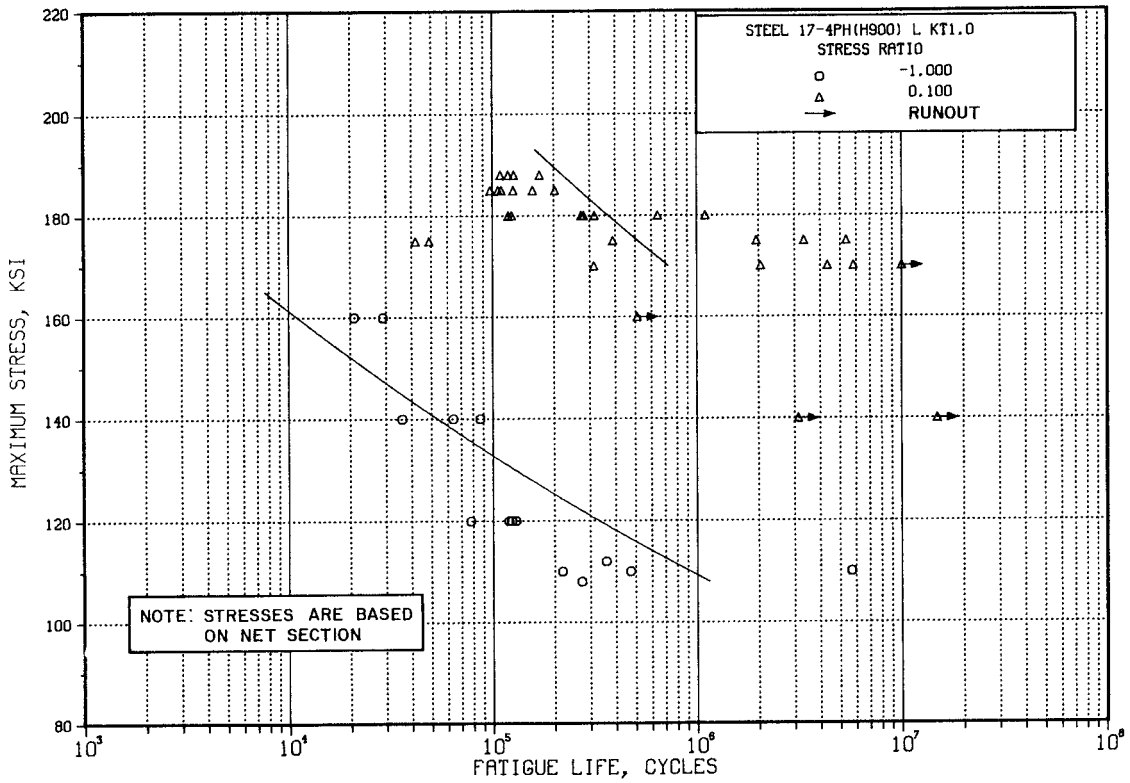

Figure 2.6.9.1.8(a). Best-fit S/N curves for unnotched 17-4PH (H900) bar, longitudinal direction.

Correlative Information for Figure 2.6.9.1.8(a)

Product Form: Bar, 1 inch and 1.125 inch diameter

Properties:	TUS, ksi	TYS, ksi	Temp., °F
	202	195	RT

Specimen Details: Unnotched
1.25 inch gross diameter
0.252 inch net diameter

Surface Condition: Polished

References: 2.6.9.1.8(a)

Test Parameters:
Loading - Axial
Frequency - 1800 cpm
Temperature - RT
Environment - Air

No. of Heats/Lots: Not specified

Equivalent Stress Equation:
$\text{Log } N_f = 30.6\text{-}11.2 \log (S_{eq})$
$S_{eq} = S_{max} (1\text{-}R)^{0.52}$
Std. Error of Estimate, Log (Life) = 0.531
Standard Deviation, Log (Life) = 0.672
$R^2 = 38\%$

Sample Size: = 42

[Caution: The equivalent stress model may provide unrealistic life predictions for stress ratios beyond those represented above.]

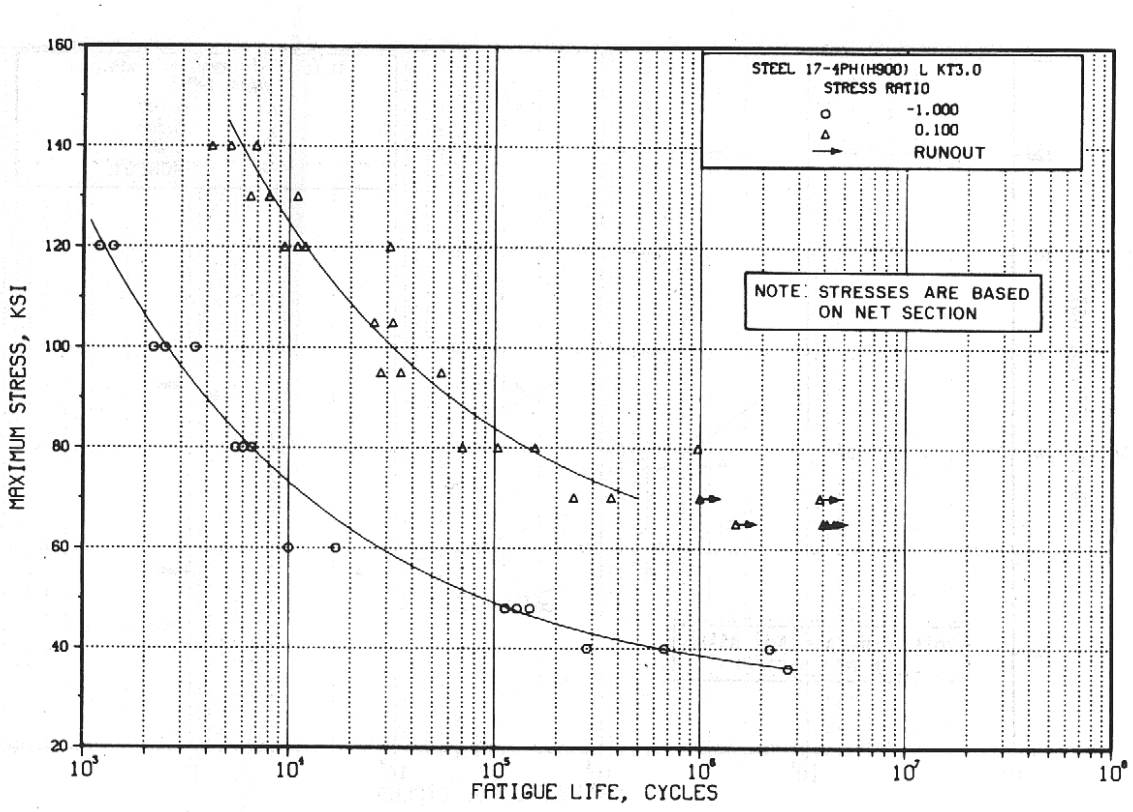

Figure 2.6.9.1.8(b). Best-fit S/N curves for notched, K_t = 3.0, 17-4PH (H900) bar, longitudinal direction.

Correlative Information for Figure 2.6.9.1.8(b)

Product Form: Bar, 1 inch and 1.125 inch diameter

Properties:	TUS, ksi	TYS, ksi	Temp., °F
	202	195	RT

Specimen Details: Circumferential V-Groove, K_t = 3.0

Gross diameter inches	Net diameter inches	Notch radius inches
0.430	0.300	0.016
0.357	0.252	0.013

60° flank angle, ω

Surface Condition: Polished

Reference: 2.6.9.1.8(a)

Test Parameters:
Loading - Axial
Frequency - Not specified
Temperature - RT
Environment - Air

No. of Heats/Lots: Not specified

Equivalent Stress Equation:
$\log N_f = 9.10 - 2.79 \log (S_{eq} - 48.4)$
$S_{eq} = S_{max} (1-R)^{0.67}$
Std. Error of Estimate, Log (Life) = 0.235
Standard Deviation, Log (Life) = 0.897
R^2 = 93%

Sample Size: 39

[Caution: The equivalent stress model may provide unrealistic life predictions for stress ratios beyond those represented above.]

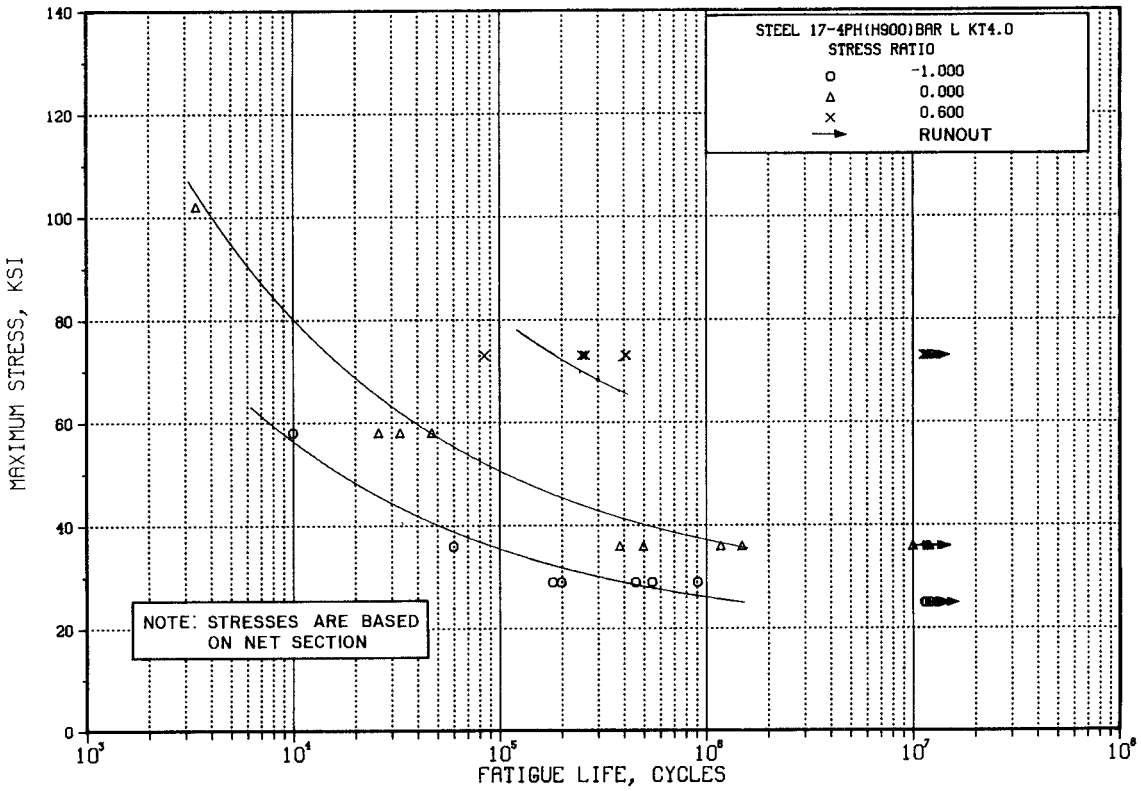

Figure 2.6.9.1.8(c). Best-fit S/N curves for notched, K_t = 4.0, 17-4PH (H900) bar, longitudinal direction.

Correlative Information for Figure 2.6.9.1.8(c)

Product Form: Bar, 0.787 inch diameter, vacuum melted

Properties:	TUS, ksi	TYS, ksi	Temp., °F
	207	—	RT

Specimen Details: Circumferential
V-Groove, K_t = 4.0
0.492 inch gross diameter
0.256 inch net diameter
0.008 inch notch radius, n
60° flank angle, ω

Surface Condition: Machined and aged

Reference: 2.6.9.1.8(b)

Test Parameters:
Loading - Axial
Frequency - 2000 cpm
Temperature - RT
Environment - Air

No. of Heats/Lots: 1

Equivalent Stress Equation:
Log N_f = 9.03-2.91 log (S_{eq} - 26.1)
$S_{eq} = S_{max} (1-R)^{0.51}$
Std. Error of Estimate, Log (Life) = 0.345
Standard Deviation, Log (Life) = 0.812
R^2 = 82%

Sample Size: = 22

[Caution: The equivalent stress model may provide unrealistic life predictions for stress ratios beyond those represented above.]