SAE 8620
Carburized
Iteration #42

Bending Fatigue Results

Prepared by:
Meritor

Prepared for:
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Bending Fatigue Process Information
SAE 8620-Iteration No. 42
Meritor
November 28,2000

Fatigue Curve Presented As Attached Graph

Property	Result
Case Depth to 50 HRC	0.072 inches
Surface Hardness, HRC	59.8-61.3 (60.8 Avg.)
Core Hardness, HRC	35.7
Intergranular Oxidation, in.	0.00095 Avg.
Surface Non-martensitic	B1
Transformation Product Density	Per Caterpillar 1E2532
Microcrack Density	Maximum Length: 0.00005 in. (4 Fields of 2 Each)
Retained Austenite (X-ray Analysis)	21.2-28.6% (25.6% Avg.)
Distance To First Bainite, in.	0.053
Alloy Segregation	Moderate
Surface Compressive Residual Stress, KSI	42.9-54.8 (47.8 Avg)

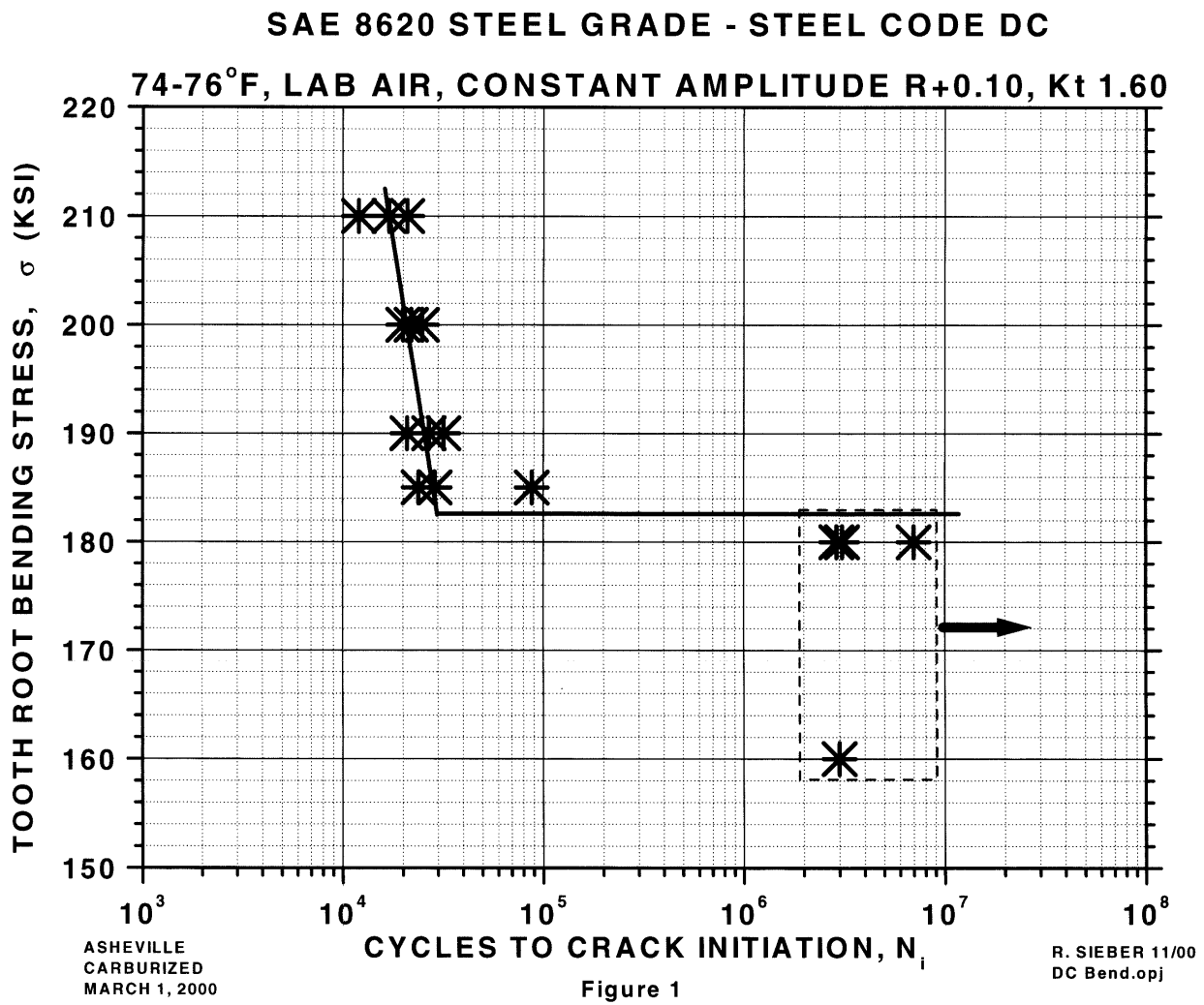
SAE 8620 STEEL GRADE - STEEL CODE DC
74-76°F, LAB AIR, CONSTANT AMPLITUDE R+0.10, Kt 1.60
TOOTH ROOT BENDING STRESS, σ (KSI)
220
210
200
190
180
170
160
150
10^3
10^4
10^5
10^6
10^7
10^8
CYCLES TO CRACK INITIATION, N_i
ASHEVILLE
CARBURIZED
MARCH 1, 2000
R. SIEBER 11/00
DC Bend.opj

Figure 1