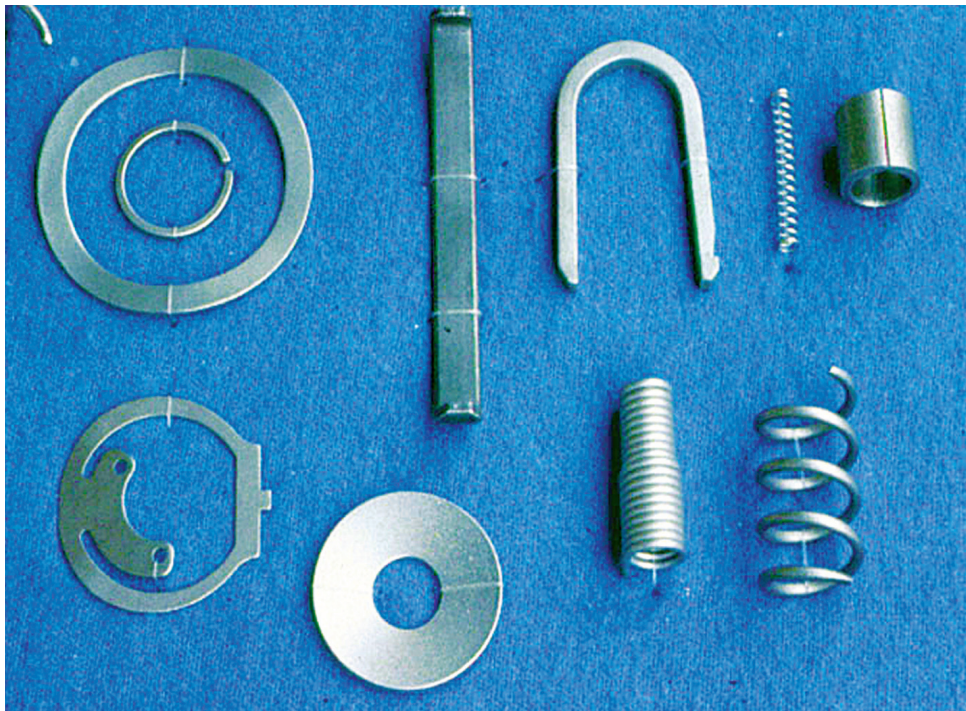
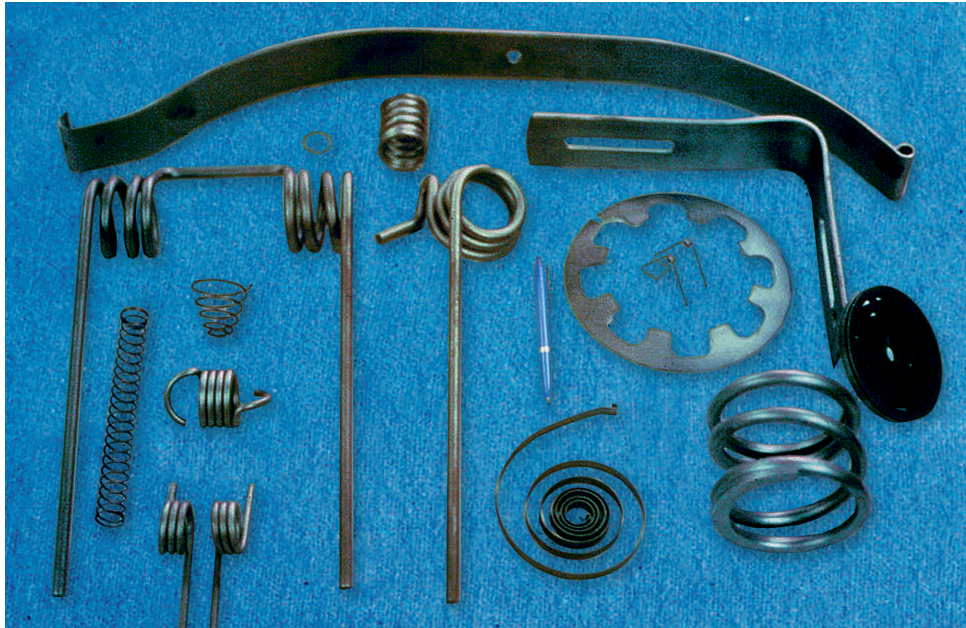




Shot peening and decarburization



Decarburization by heat treatments

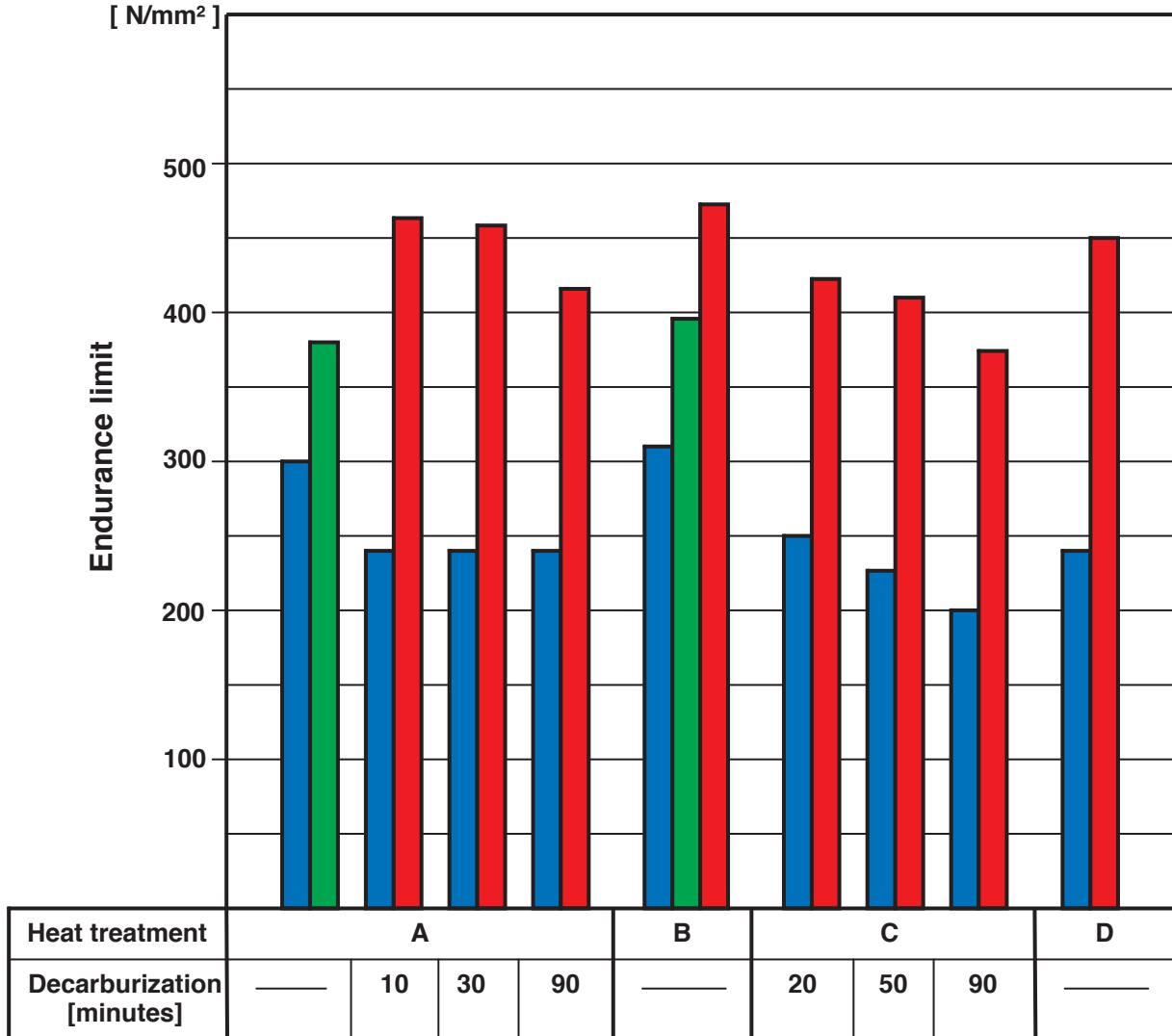
Heat treatments carburize or decarburize the surface layer of parts, depending on the amount of heat, the time, the carburizing powder and the adjacent medium. Decarburization reduces the fatigue strength of parts.

Subsequent shot peening improves the fatigue strength to at least the level before decarburization occurred and removes scales.



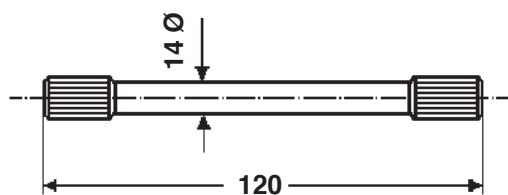
Shot peening and decarburization

55 Cr 3, tempered, $R_m = 1850 \text{ N/mm}^2$



A = tempered and decarburized
B = tempered not decarburized
C = austenized and decarburized
D = austenized not decarburized

- = decarburized
- = decarburized and polished
- = decarburized and shot peened



Torsion bar