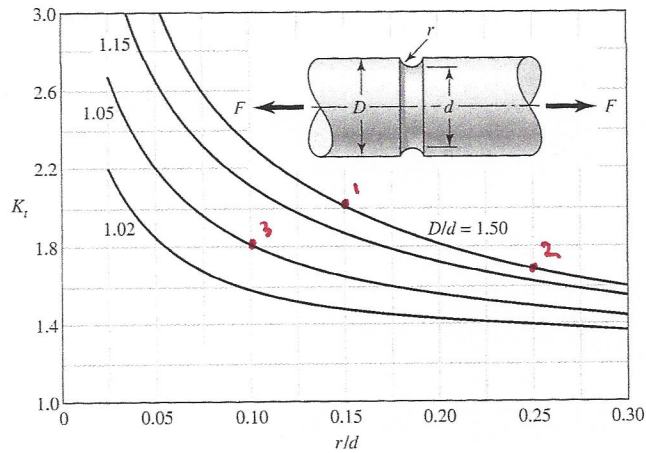


Table A-15Charts of Theoretical Stress-Concentration Factors K_t^* (Continued)**Figure A-15-13**

Grooved round bar in tension.
 $\sigma_0 = F/A$, where $A = \pi d^2/4$.



$$1_T = 2.01$$

$$2_T = 1.70$$

$$3_T = 1.81$$

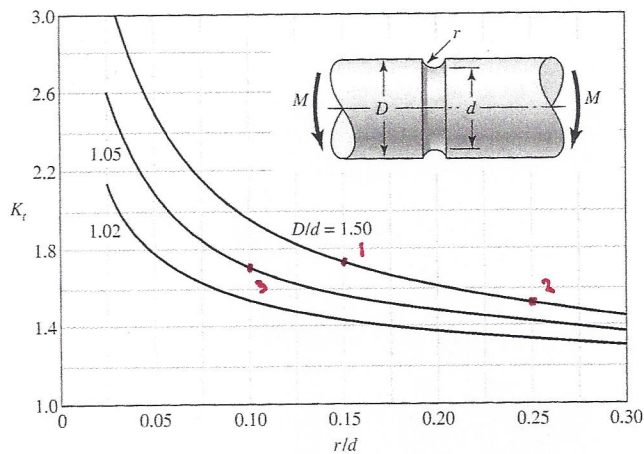
$$\frac{1_T}{1_M} = 1.1686$$

$$\frac{2_T}{2_M} = 1.1258$$

$$\frac{3_T}{3_M} = 1.0647$$

Figure A-15-14

Grooved round bar in bending.
 $\sigma_0 = Mc/I$, where $c = d/2$
 and $I = \pi d^4/64$.



$$1_M = 1.72$$

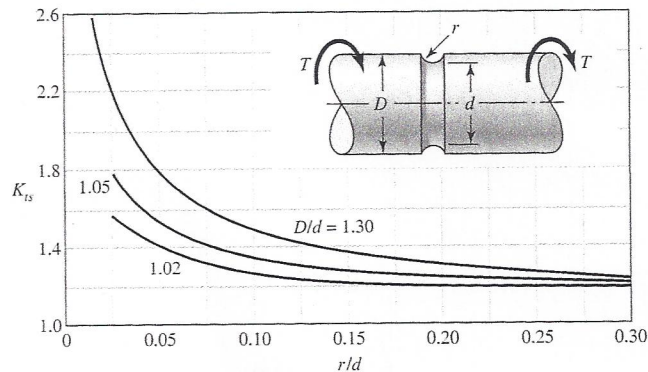
$$2_M = 1.51$$

$$3_M = 1.70$$

$$\text{Avg } \frac{T}{M} \approx 1.12$$

Figure A-15-15

Grooved round bar in torsion.
 $\tau_0 = Tc/J$, where $c = d/2$ and
 $J = \pi d^4/32$.



*Factors from R. E. Peterson, "Design Factors for Stress Concentration," Machine Design, vol. 23, no. 2, February 1951, p. 169; no. 3, March 1951, p. 161; no. 5, May 1951, p. 159; no. 6, June 1951, p. 173; no. 7, July 1951, p. 155. Reprinted with permission from Machine Design, a Penton Media Inc. publication.