

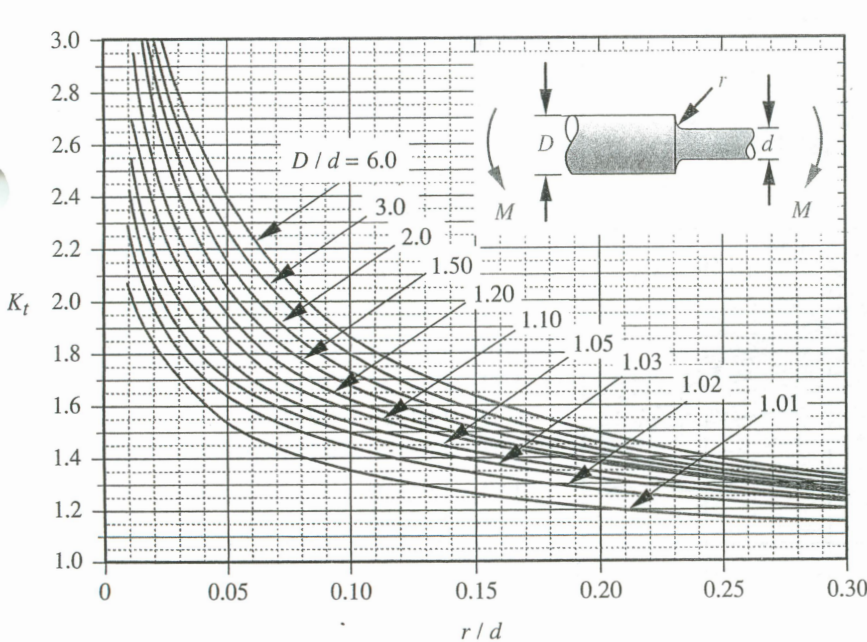
$$K_t \cong A \left(\frac{r}{d} \right)^b$$

where :

D/d	A	b
2.00	1.014 70	-0.300 35
1.50	0.999 57	-0.282 21
1.30	0.996 82	-0.257 51
1.20	0.962 72	-0.255 27
1.15	0.980 84	-0.224 85
1.10	0.984 50	-0.208 18
1.07	0.984 98	-0.195 48
1.05	1.004 80	-0.170 76
1.02	1.012 20	-0.124 74
1.01	0.984 13	-0.104 74

FIGURE C-1

Geometric Stress-Concentration Factor K_t for a Shaft with a Shoulder Fillet in Axial Tension



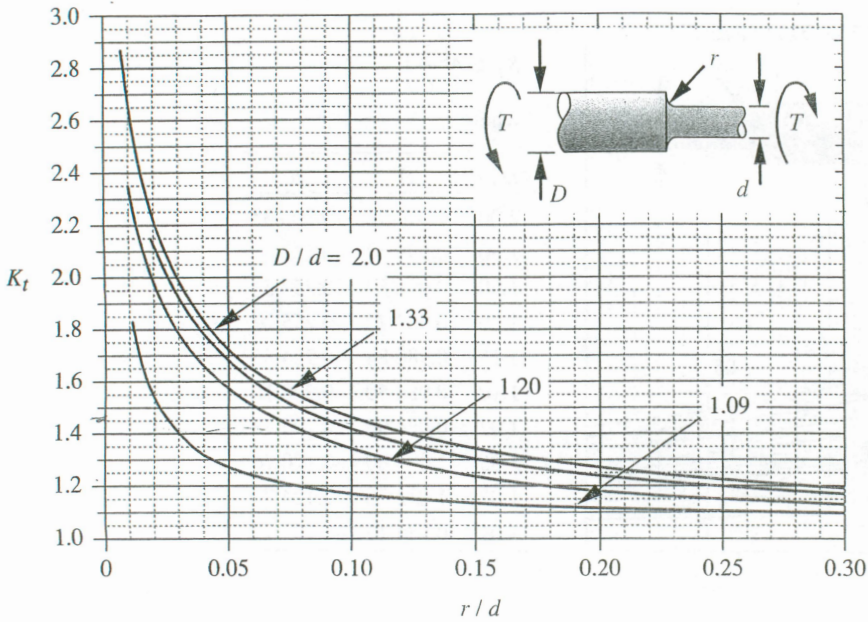
$$K_t \cong A \left(\frac{r}{d} \right)^b$$

where :

D/d	A	b
6.00	0.878 68	-0.332 43
3.00	0.893 34	-0.308 60
2.00	0.908 79	-0.285 98
1.50	0.938 36	-0.257 59
1.20	0.970 98	-0.217 96
1.10	0.951 20	-0.237 57
1.07	0.975 27	-0.209 58
1.05	0.981 37	-0.196 53
1.03	0.980 61	-0.183 81
1.02	0.960 48	-0.177 11
1.01	0.919 38	-0.170 32

FIGURE C-2

Geometric Stress-Concentration Factor K_t for a Shaft with a Shoulder Fillet in Bending



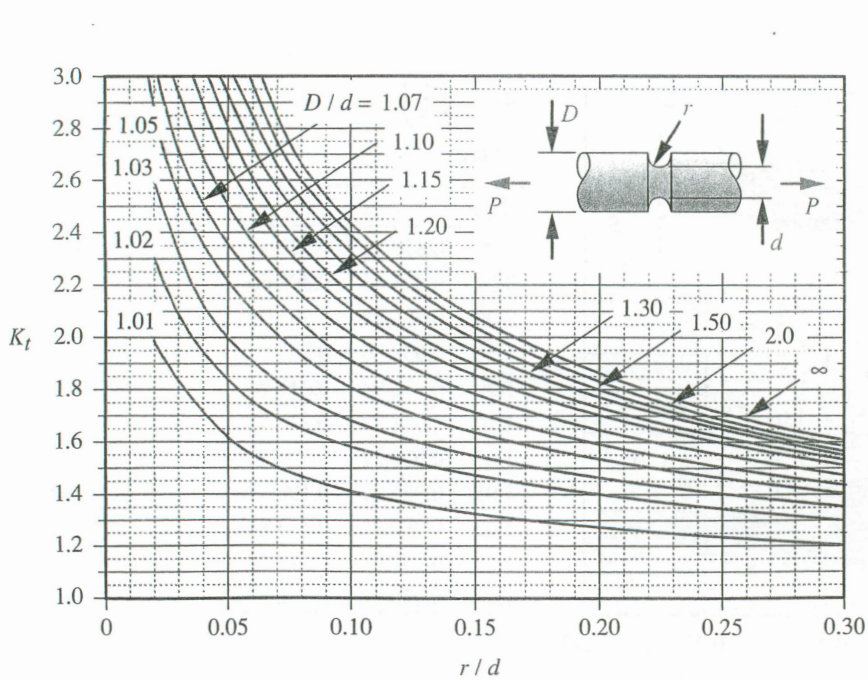
$$K_t \cong A \left(\frac{r}{d} \right)^b$$

where:

D/d	A	b
2.00	0.863 31	-0.238 65
1.33	0.848 97	-0.231 61
1.20	0.834 25	-0.216 49
1.09	0.903 37	-0.126 92

FIGURE C-3

Geometric Stress-Concentration Factor K_t for a Shaft with a Shoulder Fillet in Torsion



$$K_t \cong A \left(\frac{r}{d} \right)^b$$

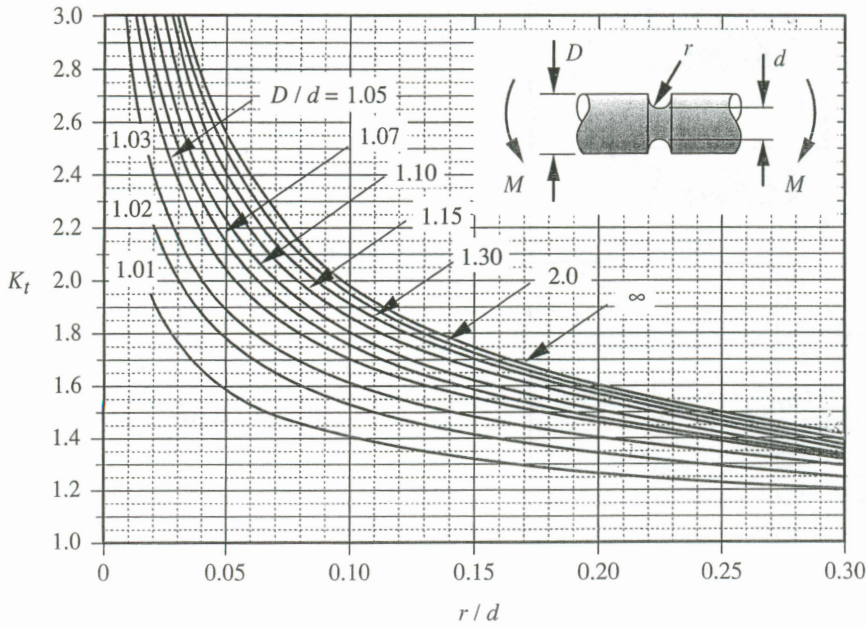
where:

D/d	A	b
∞	0.993 72	-0.393 52
2.00	0.993 83	-0.382 31
1.50	0.998 08	-0.369 55
1.30	1.004 90	-0.355 45
1.20	1.010 70	-0.337 65
1.15	1.026 30	-0.316 73
1.10	1.027 20	-0.294 84
1.07	1.023 80	-0.276 18
1.05	1.027 20	-0.252 56
1.03	1.036 70	-0.216 03
1.02	1.037 90	-0.187 55
1.01	1.000 30	-0.156 09

FIGURE C-4

Geometric Stress-Concentration Factor K_t for a Grooved Shaft in Axial Tension





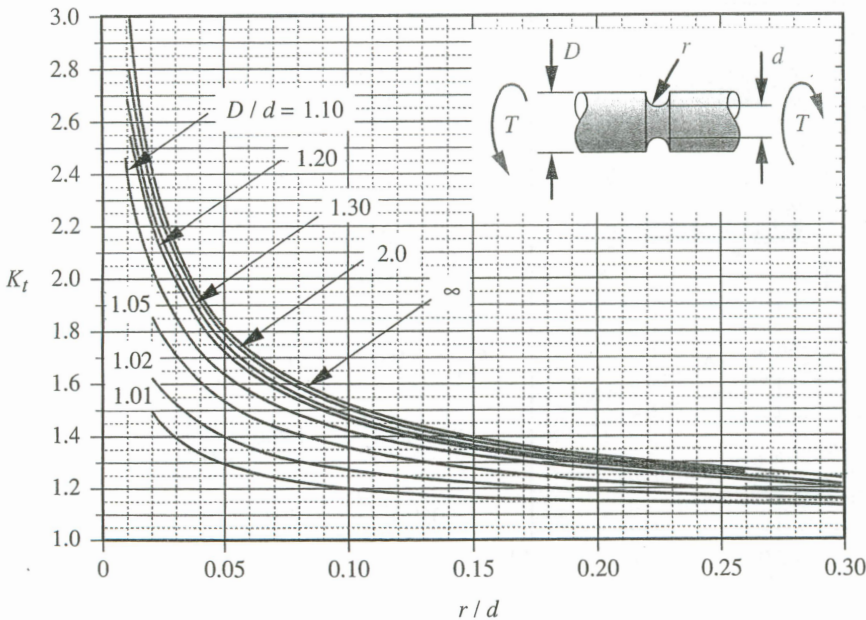
$$K_t \equiv A \left(\frac{r}{d} \right)^b$$

where :

D/d	A	b
∞	0.948 01	-0.333 02
2.00	0.936 19	-0.330 66
1.50	0.938 94	-0.323 80
1.30	0.942 99	-0.315 04
1.20	0.946 81	-0.305 82
1.15	0.953 11	-0.297 39
1.12	0.955 73	-0.288 86
1.10	0.954 54	-0.282 68
1.07	0.967 74	-0.264 52
1.05	0.987 55	-0.241 34
1.03	0.990 33	-0.215 17
1.02	0.977 53	-0.197 93
1.01	0.993 93	-0.152 38

FIGURE C-5

Geometric Stress-Concentration Factor K_t for a Grooved Shaft in Bending



$$K_t \equiv A \left(\frac{r}{d} \right)^b$$

where :

D/d	A	b
∞	0.881 26	-0.252 04
2.00	0.890 35	-0.240 75
1.30	0.894 60	-0.232 67
1.20	0.901 82	-0.223 34
1.10	0.923 11	-0.197 40
1.05	0.938 53	-0.169 41
1.02	0.968 77	-0.126 05
1.01	0.972 45	-0.101 62

FIGURE C-6

Geometric Stress-Concentration Factor K_t for a Grooved Shaft in Torsion

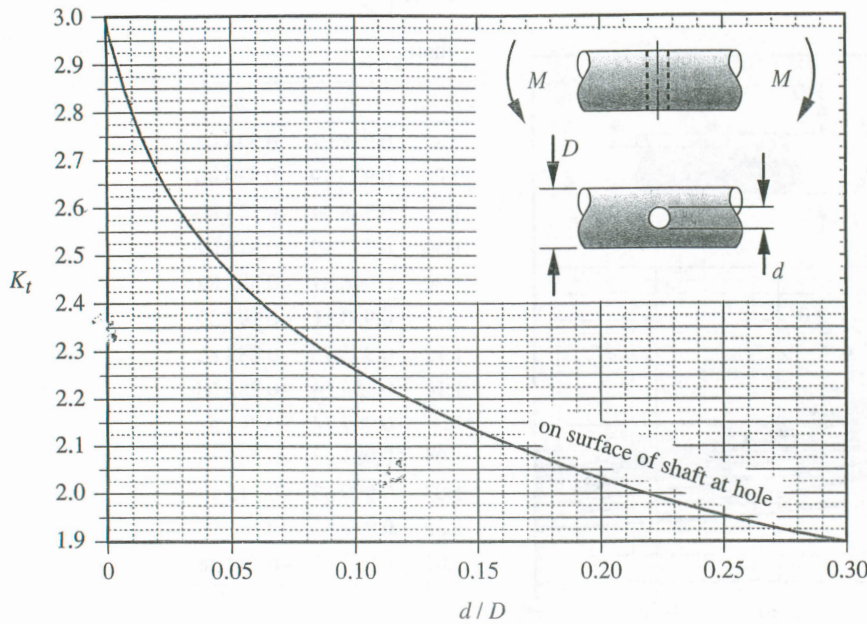


FIGURE C-7
Geometric Stress-Concentration Factor K_t for a Shaft with a Transverse Hole in Bending

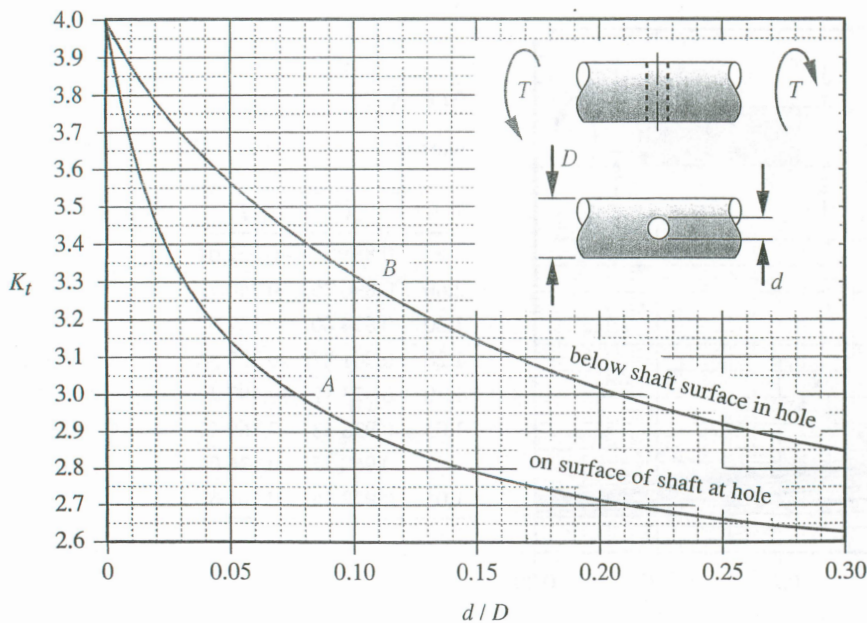
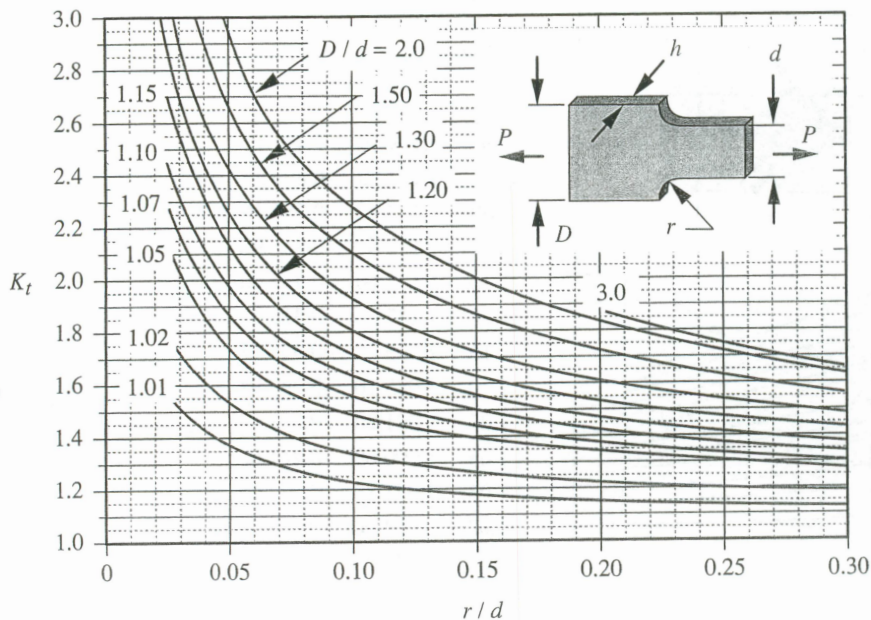


FIGURE C-8
Geometric Stress-Concentration Factor K_t for a Shaft with a Transverse Hole in Torsion



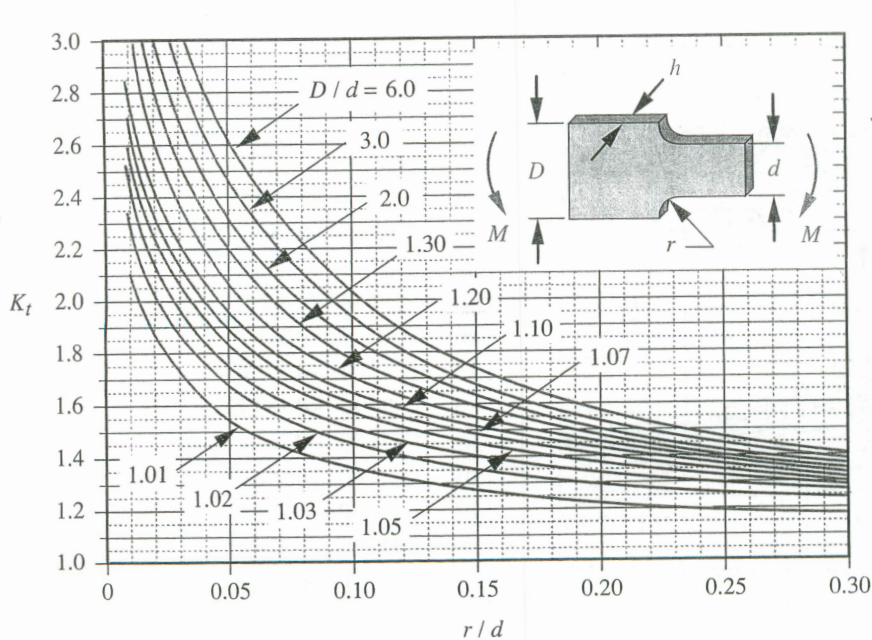
$$K_t \cong A \left(\frac{r}{d} \right)^b$$

where :

D/d	A	b
2.00	1.099 60	-0.320 77
1.50	1.076 90	-0.295 58
1.30	1.054 40	-0.270 21
1.20	1.035 10	-0.250 84
1.15	1.014 20	-0.239 35
1.10	1.013 00	-0.215 35
1.07	1.014 50	-0.193 66
1.05	0.987 97	-0.138 48
1.02	1.025 90	-0.169 78
1.01	0.976 62	-0.106 56

FIGURE C-9

Geometric Stress-Concentration Factor K_t for a Filleted Flat Bar in Axial Tension



$$K_t \cong A \left(\frac{r}{d} \right)^b$$

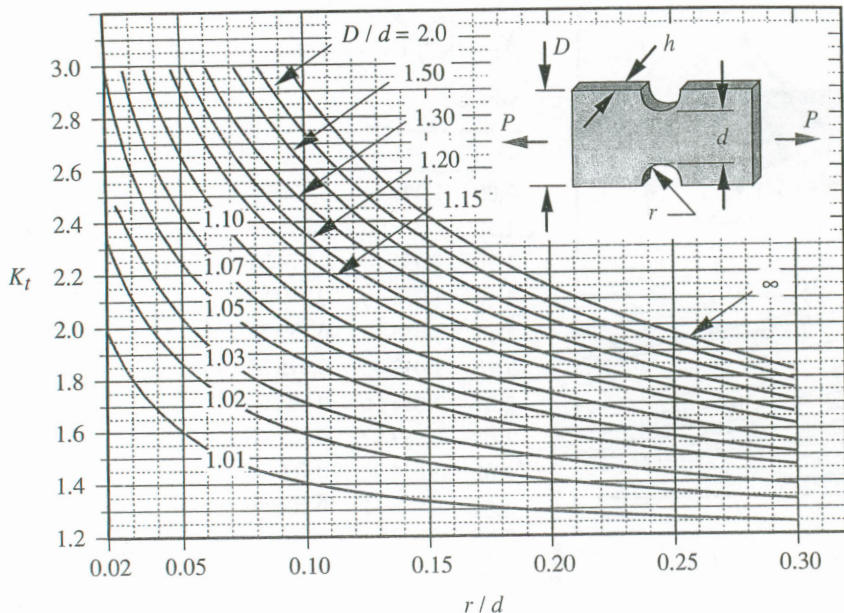
where :

D/d	A	b
6.00	0.895 79	-0.358 47
3.00	0.907 20	-0.333 33
2.00	0.932 32	-0.303 04
1.30	0.958 80	-0.272 69
1.20	0.995 90	-0.238 29
1.10	1.016 50	-0.215 48
1.07	1.019 90	-0.203 33
1.05	1.022 60	-0.191 56
1.03	1.016 60	-0.178 02
1.02	0.995 28	-0.170 13
1.01	0.966 89	-0.154 17

FIGURE C-10

Geometric Stress-Concentration Factor K_t for a Filleted Flat Bar in Bending





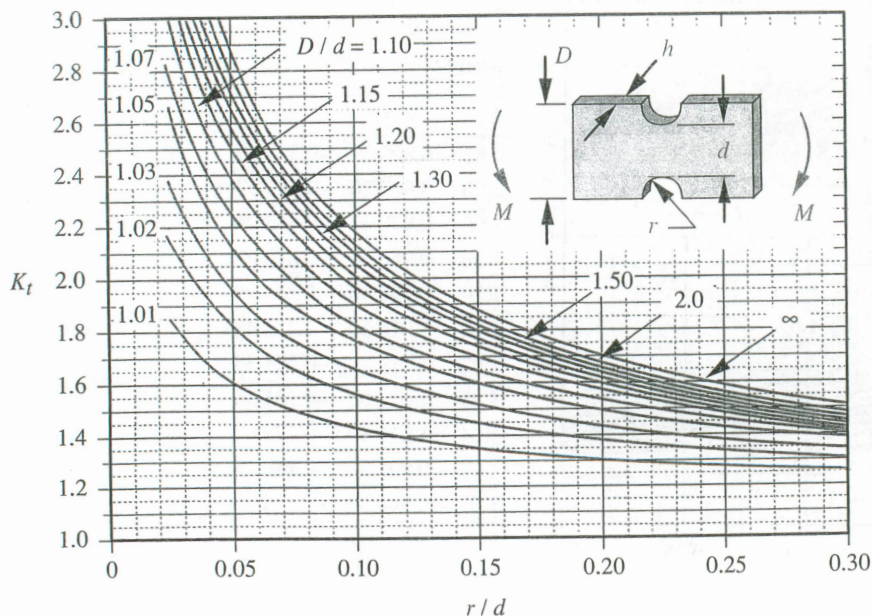
$$K_t \cong A \left(\frac{r}{d} \right)^b$$

where :

D/d	A	b
∞	1.109 50	-0.417 12
3.00	1.113 90	-0.409 23
2.00	1.133 90	-0.385 86
1.50	1.132 60	-0.365 92
1.30	1.158 60	-0.332 60
1.20	1.147 50	-0.315 07
1.15	1.095 20	-0.325 17
1.10	1.085 10	-0.299 97
1.07	1.091 20	-0.268 57
1.05	1.090 60	-0.241 63
1.03	1.051 80	-0.222 16
1.02	1.054 00	-0.188 79
1.01	1.042 60	-0.141 45

FIGURE C-11

Geometric Stress-Concentration Factor K_t for a Notched Flat Bar in Axial Tension



$$K_t \cong A \left(\frac{r}{d} \right)^b$$

where :

D/d	A	b
∞	0.970 79	-0.356 72
3.00	0.971 94	-0.350 47
2.00	0.968 01	-0.349 15
1.50	0.983 15	-0.333 95
1.30	0.982 88	-0.326 06
1.20	0.990 55	-0.313 19
1.15	0.993 04	-0.302 63
1.10	1.007 10	-0.283 79
1.07	1.014 70	-0.261 45
1.05	1.025 00	-0.240 08
1.03	1.029 40	-0.211 61
1.02	1.037 40	-0.184 28
1.01	1.060 50	-0.133 69

FIGURE C-12

Geometric Stress-Concentration Factor K_t for a Notched Flat Bar in Bending

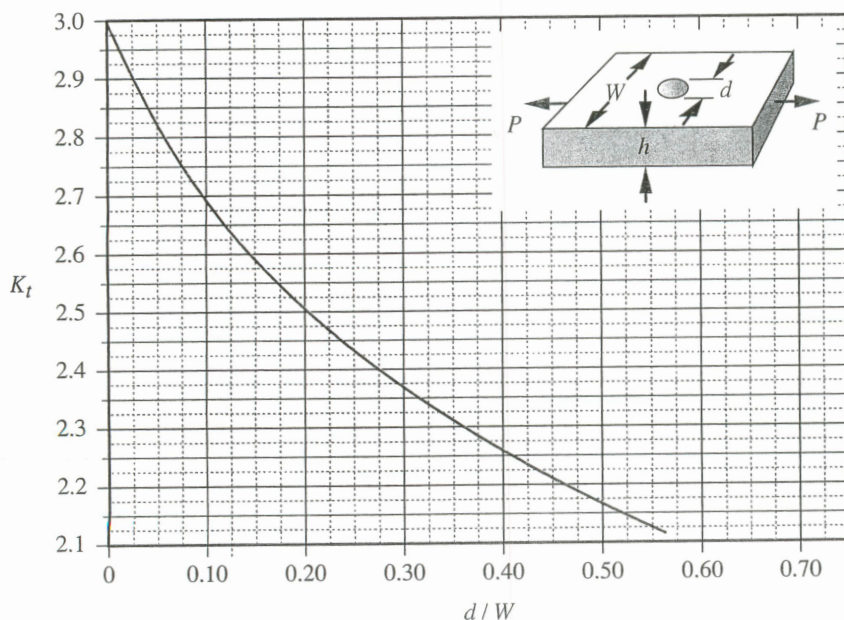


FIGURE C-13 Geometric Stress-Concentration Factor K_t for a Flat Bar with Transverse Hole in Axial Tension

for $\frac{d}{W} \leq 0.65$:

$$K_t \cong 3.0039 - 3.753 \frac{d}{W} + 7.9735 \left(\frac{d}{W}\right)^2 - 9.2659 \left(\frac{d}{W}\right)^3 + 1.8145 \left(\frac{d}{W}\right)^4 + 2.9684 \left(\frac{d}{W}\right)^5$$

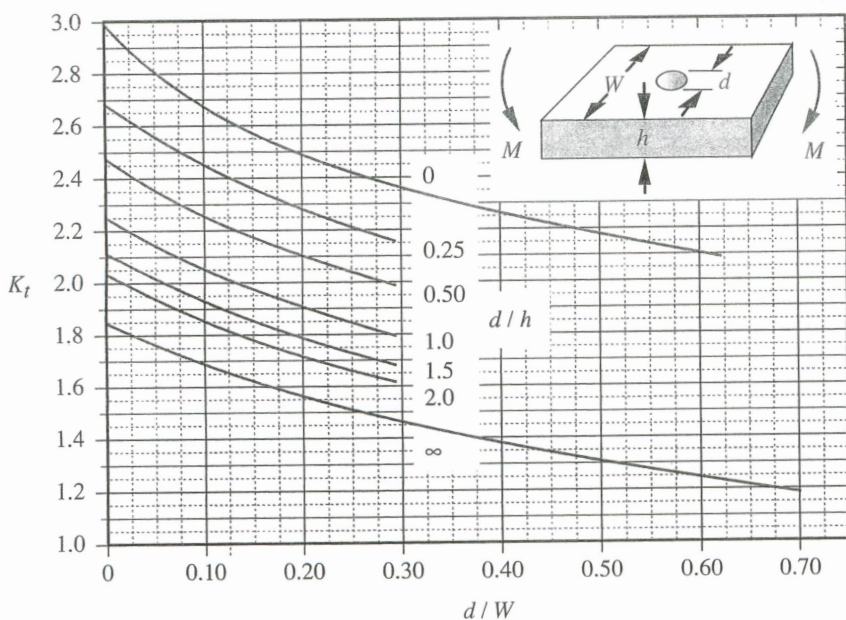


FIGURE C-14 Geometric Stress-Concentration Factor K_t for a Flat Bar with Transverse Hole in Bending

for $\frac{d}{h} \Rightarrow 0$ and $\frac{d}{W} \leq 0.65$:

$$K_t \cong 2.9947 - 3.4833 \frac{d}{W} + 5.8268 \left(\frac{d}{W}\right)^2 - 4.1986 \left(\frac{d}{W}\right)^3$$

for $\frac{d}{h} \geq 0.25$: $K_t \cong A e^{[b(d/W)]}$

where:

d/h	A	b
0.25	2.68750	-0.75128
0.50	2.46620	-0.77215
1.00	2.24000	-0.78739
1.50	2.02430	-0.80821
2.00	2.10560	-0.79878
∞	1.80820	-0.66702