

Collection of typographic errors:

Design of Machine Elements by Spotts, Shoup and Hornberger,
8th edition, Prentice Hall

p.25 Eq. 5: the last term in the equation should be $\int ydA$ not $\int yda$.

Figure 1-4. sub figure (b): all y_1, y_2, y_3 should be $\bar{y}_1, \bar{y}_2, \bar{y}_3$, to conform with Eq.(6).

p. 27 Fig.1.5: the length CD should be $v d\phi$ not just v .

p. 50 Figure 1-20, subfigure (b), there is letter “T” under dx. It should be a Greek letter τ

p. 59 Above Eq. (33) A = Area of cross section. A is missing.

p. 63: Above Eq. (39), It should be $\sin^2 \varphi$, not $\sin^{2\varphi}$, in the first formula.

p. 65 Line 2 from top, σ_x should be replaced by σ_y

Both Eq. (41) & (42): Inside the square root the σ_2 should be σ_x . (Two places)

p. 66 Eq. (44) , the first term under the square root is $(\sigma_x - \sigma_y / 2)$, the x was a mistake.

p. 67 Figure 1-32 sub figure (a) The $\tau_{xy} = -5000$ psi should be $\tau_{xy} = \boxed{5000}$ psi the minus sign is wrong.

Figure 1-32: Three lines from the bottom line, (e) The maximum shear stress τ_{\max} and the corresponding.... The Z_{\max} was a mistake.

p. 73: The CD ROM Module 1-5 output should read as:

$$\boxed{S_1} = 33.7 \text{ MPa}$$

$$\boxed{S_2} = 19.1 \text{ MPa}$$

$$\boxed{S_3} = 7.1 \text{ MPa.}$$

Principal stresses are defined as “S” on p.66 and 67. S_1 is always the largest algebraic number. $S_1 > S_2 > S_3$

p. 92: **Problem 40.** Answers are $\tau = 2.36, 4.05, 5.06$, and 5.4 MPa, NOT $\tau = 2.1, 3.6, 4.5$, and 4.8 MPa

p. 104: **Problem 1.87**, ID = $\boxed{4.03}$ in., not 4.3 in.

p. 104: **Problem 1-88**: Answers: Max. = -14 MPa, Min. = -84 MPa, Max. Shear = 35 MPa

p. 105: **Problem 92**, $\sigma_y = \boxed{14}$ MPa. The minus sign is missing.

p 109: **Problem 106**: 12 in. length should be read as 300 mm, and length becomes 300.15 mm not 200.15 mm

p.135: $S_1 = 145.21$, $S_2 = 53.37$, $S_3 = 41.42$

p. 170: **Problem 2-1**: Material is 1035 hot rolled steel, with 1 inch width.

p. 170: **Problem 2-3**: Answers: (a) $F_s = 1.39$, (b) $F_s = 1.46$

p. 171: **Problem 2.6**: The answers should be $\boxed{\sigma_x = 130.16 \text{ MPa}, \sigma_y = -69.84 \text{ MPa}}$

p. 171: **Problem 2.10.** Figure 2-36, $D = 100 \text{ mm}$ is missing.

p. 173: **Problem 2.15:** use Goodman equation.

p. 174: **Problem 2.18:** use Goodman equation. Answer: $F_s = 1.75$

Bending moment varies from 1,000,00 to 5,000,000 Nmm, not 1,040,000.

p. 175: **Problem 2.23.** Figure 2-49, the fillet radius $r=0.5$ and the width of the smaller side = 2 inch.

p. 177: **Problem 2.27.** Ans. (a) $F_s=3.46$; (b) $F_s=3.81$

p. 177: **Problem 2.30.** Ans. (a) $F_s=4.02$

p.192: Example 3.3, By Eqs.(2) and (5)

$T = \tau l / r = \dots\dots\dots$, the letter l is an error.

p. 207: Example 3-8, $d_{\text{shaft}}=3-7/16$, not 3-7/6.

p. 209: Figure 3-11, the left side figure is Sled-Runner Keyway, the right figure is Profile Keyway.

p. 210: Figure 3-12, Remove “Sled-Runner Keyway”, “Profile Keyway” from the figure.

p. 212: First calculation: $\tau = 7,000/1841$, not 1, 841. The comma is wrong.

p. 221: Example 3-15, In Eq. (16) calculation under $f = \dots = 11.80$ cycles/sec Under the radical the “W 80x0.7922” , W should be deleted

p.222: Example 3.16: Find the deflection for point A. This is a miss spelling for deflection.

p. 227: EQ. (21) The numerator should be a letter t , not t.

p. 229: Module 3-2 , last line: it should be b/c and not d/c

p.. 233 : third line below EQ. (28), is designated by a not α .

p. 234: Example 3-19 Solution (a):

By EQ. (29): we have $\theta_1 = \dots\dots\dots 0.000729 \text{ Rad./length} = 0.0418^\circ/\text{length}.$

in the above equation the value of 6.565^2 should be 6.562^2 .

p. 259: **Problem 3.84:** In Figure 3-83 the distance of the 300 lb load is 20 inches not 25 inches. The force for the bearing R_3 should be R_3 not R_2 .