

**Errata for Deen, *Analysis of Transport Phenomena*, Second Edition
Updated April 27, 2016**

- p. xix Line 6, "... see Appendix A."
- p. 33 Line 2, Eq. (2.2-1) should be (2.2-4).
- p. 48 In the integral in Eq. (2.8-18), " dt " should be " dr ."
- p. 70 Line 3, Eq. (3.3-3) not (3.2-3)
- p. 74 Line 3, the exponent in the text expression should be $+1/2$ not $-1/2$.
- p. 75 Table 3-1, line 3, right column: $N_{A0} = 3.0 \times 10^{-9}$ (not 6.0×10^{-9})
Table 3-1, line 4, right column: $N_{B0} = -6.0 \times 10^{-8}$ (not -1.2×10^{-7})
- p. 76 Equation (3.2-21) should be (3.3-21).
Equation (3.2-22) should be (3.3-22).
9 lines below Eq. (3.3-23), 23 pM (not 0.23 pM)
- p. 124 In Eq. (4.3-19), " $O(\varepsilon^3)$ " not " $O(\varepsilon^2)$."
- p. 125 In Eq. (4.3-33), $\partial C_A / \partial x$ not $\partial C_A / \partial t$.
- p. 129 5 lines above Eq. (4.4-6), "Problem 4-16" not "Problem 4-15."
- p. 132 In Eq. (4.4-27), " $Y \rightarrow \infty$ " not " $\gamma \rightarrow \infty$."
- p. 133 Immediately below Eq. (4.4-39), delete period after $C_B(t)$.
- p. 135 In Eq. (4.4-57), $\tilde{\theta}_0(\tau)$ (add tilde).
- p. 136 In Eq. (4.4-70), $\tilde{\phi}(\tau)$ (tilde not carot, on left side of equation only)
- p. 138 Insert ε in Eq. (4.4-84) to read

$$\frac{\partial^2 \tilde{\Theta}}{\partial \eta^2} + \varepsilon \frac{\partial^2 \tilde{\Theta}}{\partial Z^2} = 0$$

- p. 138 Insert subscript zero in first part of Eq. (4.4-89) to read

$$\frac{\partial^2 \tilde{\Theta}_0}{\partial \eta^2} = 0$$

- p. 148 In Problem 4-14(b), " H_V " in denominator of equation, not " H "
- p. 158 3 lines below Eq. (5.3-4), "Eq. (5.3-3)" not "Eq. (5.5-3)."
- p. 160 In Eq. (5.3-17), " $\sin n\pi x$ " not " $\sin n\pi y$ " (two places).
- p. 184 Replace " p " by " p_{nm} " in Eqs. (5.6-68), (5.6-70), and (5.6-71).
- p. 184 In Eq. (5.6-71), remove space between n and h in "sinh" (two places).
- p. 189 The equation in the last line of Example 5.7-2 should read $f(z) = 1 - (z/\gamma)$.
- p. 192 In Table 5-5, the characteristic equation for Case III should be

$$\lambda_n \ell = (1 - A\ell) \tan \lambda_n \ell$$

- p. 201 In Eq. (5.9-9), add superscript 2 after $(z - z')$ in second expression.
- p. 224 In Eq. (6.2-18), insert and delete minus signs to read

$$\lim_{s \rightarrow 0} \frac{1}{S} \left[\mathbf{s}(-\mathbf{n}) \Big|_1 S_1 + \mathbf{s}(\mathbf{n}) \Big|_2 S_2 \right] = \mathbf{0}$$

- p. 225 Two lines below Eq. (6.2-24), "Eq. (1.2-10)" not "Eq. (1.2-8)"
- p. 243 In Eq. (6.6-2), delete extra "=" to read

$$v_t \Big|_2 - v_t \Big|_1 = \frac{L_s}{\mu} \tau_{nt} \Big|_2 = 2L_s \Gamma_{nt} \Big|_2$$

- p. 274 In line 5 of Example 7.2-3, align left.
- p. 288 4 lines below Eq. (7.5-31), $z \geq 2H$ not $z \leq 2H$.
- p. 321 \mathcal{P} in Eq. (8.3-11) (font correction)
- p. 327 3 lines below Eq. (8.4-30), insert space between "for" and " $f(r)$."
- p. 342 \mathcal{P} in Eq. (8.6-41) (font correction)
- p. 365 Delete period after Eq. (9.2-15).
- p. 368 In middle expression within Eq. (9.2-23), add tilde over \mathcal{P}
- p. 374 In parentheses in the line below Eq. (9.3-19), " $\mathbf{v} = \nabla \phi$ " not " $= \nabla \mathbf{v}$."

p. 379 In last part of Eq. (9.4-6), insert minus sign to read

$$\frac{\partial^2 \hat{\psi}}{\partial \hat{x} \partial \hat{y}} = -\frac{g'}{g} \eta f'' .$$

p. 380 First line below Eq. (9.4-12), $f''(0)$ not $f'(0)$

p. 390 In Eq. (9.5-23), $a = 0.375$ not 0.211 . (The expression is correct.)

p. 405 6 lines from bottom, reduce font size of " $Pe > 10$ " to match other text

p. 413 Last line, "Problem 10-4" not "Problem 10-3."

p. 429 Line 2, "Problem 10-17" not "Problem 10-10."

p. 447 In Eq. (11.3-5), insert superscript "2" in last term to read

$$\tilde{v}_x \frac{\partial \tilde{v}_x}{\partial \tilde{x}} + \hat{v}_y \frac{\partial \tilde{v}_x}{\partial \hat{y}} = \tilde{u} \frac{d\tilde{u}}{d\tilde{x}} + \frac{\partial^2 \tilde{v}_x}{\partial \hat{y}^2}$$

p. 447 In Eq. (11.3-7), insert superscript "2" in last term to read

$$\tilde{v}_x \frac{\partial \Theta}{\partial \tilde{x}} + \hat{v}_y \frac{\partial \Theta}{\partial \hat{y}} = \text{Pr}^{-1} \frac{\partial^2 \Theta}{\partial \hat{y}^2}$$

p. 514 Immediately below Eq. (13.4-35), delete hyphen in "flow-example."

p. 516 In last line of Fig. 13-10 caption, "using."

p. 528 After first equation in Problem 13-8, delete extra period.

p. 530 4 lines below Eq. (14.2-1), delete comma after g_i .

p. 531 In Eq. (14.2-4), italicize D in denominator of $D\mathbf{v}/Dt$.

p. 544 In Eq. (14.3-68), $\theta(0) = \hat{C}_p (T_F - T_0)$ not $\theta(0) = 0$.

p. 574 In Eq. (15.2-4), ∇C_i not ΔC_i .

p. 590 In Eq. (15.4-13), $d^2 \Phi/dx^2$ not $d^2 \Phi/dy^2$.

p. 596 In second part of Eq. (15.5-17), argument should be (a, θ) not (a, ∞) .

p. 624 In the last term in Eq. (A.6-4), $\partial f/\partial x_j$ not df/dx_j .

p. 643 The right-hand side of Eq. (B.4-6) should read

$$\frac{L^2}{2}[J_0^2(mL) + J_1^2(mL)]$$

p. 647 In the line above Eq. (B.5-4), "Section B.2" not "Section B.1"