

Thermal Environmental Engineering, 3rd. Ed.
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Errata last updated 5/19/05

Ch. 4

p. 88 The first equation should be changed to read

$${}_4 w_5 = \frac{(1.20)(14.3)(144)(21.4)}{(0.2)(778)} \left[\left(\frac{200}{14.3} \right)^{0.1667} - 1 \right] = 187.7 \text{ Btu/lbm}$$

Ch. 5

p. 149 Problem 5.2. The concentration should be $x=0.25$, not $x = 0,25$.

Ch. 8

p. 214 The second equation from the top should read $\eta_w = \frac{W_2 - W_1}{W_s^* - W_1}$

Ch. 10

p. 265 Equation (10.4). The last multiplier on the left hand side of the equation should be $(h_{g,t} - h_{f,w})$ not $h_{fg,w}$.

Equation (10.5). The last multiplier on the left hand side of the equation should be $(h_{g,t} - h_{f,w})$ not $h_{fg,w}$.

Ch. 12

p. 340 12th line from top, the equation for \dot{Q}_{lat} is missing the second parenthesis that should appear as follows: $\dots(1041.8 \text{ Btu/lbm}_w)/\dots$

p. 341 The last subscript in the 19th line from the top, the equation for $h_{fg,b}$, should be a w, not a v

In the last equation in Example 12.4, the last subscript on lbm should be a w, not a v.

Ch. 13

p. 406 Example 13.5. In the first line of the solution, the second angle should be $\Psi = -15^\circ$.

p. 410 Problem 13.8. The last sentence should read: Determine the number of hours that the *south-facing* side would be sunlit by direct solar radiation on June 22.

p. 410 Problem 13.9. The last sentence should read; “Assume the sun is a sphere with diameter $D_s = 1.39 \times 10^6$ km.”

Ch. 14

p. 464 Example 14.5. In the table, the vapor resistance of the insulation should be 0.047 Rep, not 0.47 Rep, and the total vapor resistance at the bottom should be $2.28 + Z_{vr}$ Rep.

p. 465 Example 14.5. The last part of the last two equations should read:
At plane 4, ... $-2.28 = 12.2$ Rep, not ... $-2.70 = 11.8$ Rep
At plane 5, ... $-2.28 = 15.2$ Rep, not ... $-2.70 = 14.8$ Rep
The first sentence in the last paragraph should read: Therefore we would select a vapor retarder with a resistance greater than 15.2 Rep.

Ch. 16

p. 534 The last terms on the right-hand sides of equations (16.1) and (16.2) that are written in terms of (w ICL) should be divided by the area, A.

p. 537 Table 16.3. Subheadings over the columns for the days should be ICL/A, not ICL.

p. 538. Table 16.4. Subheadings over the columns for the days should be ICL/A, not ICL.

Ch. 17

p. 564 Equation 17.15 should be: $LF \equiv \frac{\dot{Q}_{loss} - \dot{Q}_{gain}}{\dot{Q}_{capacity}}$

p. 581 Problem 17.12. On the last line, the heating value of fuel oil should be 140,000 Btu/gal, not 140,000 Btu/lbm.