ERRATA for
PE Chemical Practice Exam
ISBN 978-1-947801-09-7
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Errata posted 06-01-2023

Revisions are shown in red.

Question 28:
Sentence 4 should read as follows:

> The rate of heat transfer by conduction-convection Q/A [Btu/(ft^2-hr)] can be assumed to be $0.38\,(\Delta T)^{1.25}$ where ΔT is the temperature difference (°F) between the roof and the air.

Solution 13:
The equations following paragraphs two and three should read as follows:

$$\Delta h_{\text{sensible}} = h_{\text{L},440°F} - h_{\text{L},120°F} = 419 \text{ Btu/lb} - 89 \text{ Btu/lb} = 330 \text{ Btu/lb}$$

$$\Delta h_{\text{total}} = h_{\text{vap},440°F} - h_{\text{L},120°F} = 1{,}205 \text{ Btu/lb} - 89 \text{ Btu/lb} = 1{,}116 \text{ Btu/lb}$$

Solution 34:
Line 12 should read as follows:

$$\frac{1}{h_{\text{foul}}} = \frac{1}{U_o} - \frac{\delta_{\text{brick}}}{k_{\text{brick}}} - \frac{\delta_{\text{shell}}}{k_{\text{shell}}} - \frac{1}{h_o}$$

Solution 61:
The last five lines of the solution should read as follows:

> The ratio of liquid densities ψ equals 1 since the absorbing fluid is water.

$$G^2 = \frac{(0.085)(0.0909)(62.4)(32.2)}{(32)(1)(1.11)^{0.2}} = 0.475$$

$$G = 0.6893 \text{ lb/(ft}^2\text{-sec)}$$

$$\text{Area} = \frac{G'}{G} = \frac{8.34}{0.6983} = 12.10 \text{ ft}^2 = \frac{\pi D^2}{4}$$

$$D = \sqrt{\frac{(12.10)(4)}{\pi}} = 3.90 \text{ ft}$$