

Errata Sheet for the Book by Klote and Milke *Principles of Smoke Management*, ASHRAE, Atlanta GA, 2002.

p. 20, top of left column: change "...the only heat transfer is from the sprinkler to the gas." to "... the only heat transfer is from the gas to the sprinkler."

p. 23, Table 2.3: change "01127" to "01172".

p. 31, Example 3.2: change the units of extinction coefficient from "m⁻¹" to "ft⁻¹".

p. 31, Example 3.2: change "From Equation (3.12)" to "From Equation (3.11)".

p. 64, near top of left column: delete " \dot{m} = mass flow rate through the path, lb/s (kg/s)."

p. 93, 2nd from last paragraph of right column: change "16.7 psi" to "14.7 psi".

p. 95, Equation (6.15): change the term ν to ν^2 .

p. 95, right column: change " $K_{NP} = 0.108 (1.00)$ " to " $K_{NP} = 1.16 (1.00)$ ".

p. 96, 2nd from last paragraph of left column: change "NP" to "NQ".

p. 99, Table 6.1: change from "Table 6.1" to "Table 6.3".

p. 99, Table 6.2: change from "Table 6.2" to "Table 6.4".

p. 100, Table 6.3: change from "Table 6.3" to Table 6.5".

p. 100, Table 6.4: change from "Table 6.4" to Table 6.6".

p. 102, Table 6.7, in heading: change "**Roughness, e**" to **Roughness, ϵ** ".

p. 103, Example 6.9: change "From this figure, $A_o / A_s = 12.5$, and $A_o = 12.5A_s = 12.5(8.6 \times 12) = 1290 \text{ ft}^2 (120 \text{ m}^2)$." to "From this figure, $A_o / A_s = 11$, and $A_o = 11A_s = 11(8.6 \times 12) = 1140 \text{ ft}^2 (106 \text{ m}^2)$."

pp. 103 & 104, Figures 6.15, 6.16, 6.17, & 6.18: change from "L = 9 ft (27.4 m)" to "L = 9 ft (2.74 m)".

p. 143, Equation (10.3): change "-" to "+" so that it is $\Delta p_{SO} = \Delta p_{SOB} + K_\rho \nu (\rho_O - \rho_S)$.

p. 144, in Equation (10.13) add the term $\sqrt{\frac{2}{\rho}}$ so that it becomes $\dot{V}_{SBO} = \frac{2}{3} NCA_{SBOe} \sqrt{\frac{2}{\rho}} \left(\frac{\Delta p_{SOI}^{3/2} - \Delta p_{SOB}^{3/2}}{\Delta p_{SOI} - \Delta p_{SOB}} \right)$.

p. 145, Equation (10.17): change the term $\Delta p_i^{1/2} - \Delta p_b^{1/2}$ to $\Delta p_i^{3/2} - \Delta p_b^{3/2}$.

p. 145, Equation (10.19): change A_{SO} to A_{BO} .

p.147, Example 10.2: in calculations of the last line, Δp_{SBI} is 0.37 not 0.40, so the last line become

$$\dot{V}_{SB} = 475 \frac{20(0.32)}{(0.075)^{1/2}} \left(\frac{(0.37)^{3/2} - (0.05)^{3/2}}{0.37 - 0.05} \right) = 7,420 \text{ cfm (3.50 m}^3/\text{s)} .$$

p. 152, Figure 10.14: change "0.05 in H₂O (124 Pa)" to "0.05 in H₂O (12.4 Pa)".

p. 152, Equation (10.22): change the term $\Delta p_i^{1/2} - \Delta p_b^{1/2}$ to $\Delta p_i^{3/2} - \Delta p_b^{3/2}$.

p. 153, Example 10.3: add the word "opened" to the end of the 1st sentence.

p. 153, Example 10.3: 2nd line under heading **Exterior Stairwell Door**, change "Equation (10.9)" to "Equation (10.4)".

p.173, line after Equation (12.2): change “-” to “+” so that it is “ $p_B - p_O = (p_B - p_F) + (p_F - p_O)$ ”.

p. 182, Equation (13.7): change T_a term to T_o .

p. 183, in nomenclature list under Equation (13.8) change T_p to T_{cp} .

p. 184, Equation (13.13): change T_a terms to T_o .

p. 201, in nomenclature list under Equation (14.6) change C_{ef1} to C_{ef2} .

p. 205, Example 14.2: In the 7th line from the bottom, change 0.22 to 0.022 so that it becomes

$$\dot{m} = 0.022\dot{Q}_c^{1/3} z^{5/3} + 0.0042\dot{Q}_c = 0.022(1400^{1/3})(36^{5/3}) + 0.0042(1400) = 102 \text{ lb/s (46.4 kg/s) .}$$

p. 208, item b: replace **bold** font with regular font.

p. 208, 2nd from last paragraph in right column change “Figure 14.15” to “Figure 14.15A”.

p. 209, change figure number from 14.1 to 14.15A.

Appendix D Issues:

p.289 the ambient temperature is noted as 22 °C, yet the printout on p. 312 shows an ambient temperature of 20 °C.

In appendix D example, Please note the St2 area shows: fan5, openstdoor, and extstwall (3 problems) and also intwallstr, flleakstr2 (these 2 are OK). When I refer to sixth floor on pg 307 and descriptions for St2 on p. 315 and 316, it leads me to think the following floor plan changes are needed for p. 303: (1) remove fan5 (no input data shown) (2) openstdoor should be stairdoor2 (3) extstwall should be extstrwall1 (this is also misspelled for St1) (4) extstrwall2 should be added to lower outside wall within St2 like on other floors.

In appendix D example, cross-sectional area for stairdoor 1 and 2 in Table on p. 299 should be 0.252 m².

p. 300, the intwallstr leakage is only for the 10x4 wall, and neglects the 4x2.4 wall.

The wind coefficients indicate in Figure D15, indicate wind coefficients for the 4 walls as .8, -.8, -.8, and -.8.

However, in applying Table 5.3, the following coefficients would appear more reasonable .8, -.8, -.25, -.8.

p. 304, the leakage for the roof of the stairwell should not be “flrleakstr2”. Instead these should be leakage paths associated only with the leakage of the roof and not the entire shaft area.