

**TO: Jenny Welter**  
**FROM: Stan Middleman**  
**RE:ERRATA AND CHANGES**  
An Introduction to Mass and Heat Transfer

Enclosed please find Xerox copies of pages of the second printing of Middleman, *An Introduction to Mass and Heat Transfer*, on which I have marked changes. These include the corrections that had been sent to Wiley *prior* to the second printing, but which were not corrected. I also include a listing of all of these corrections. These changes should be incorporated into the third printing.

Corrections to the second printing of  
Middleman, *An Introduction to Mass and Heat Transfer*

**Chapter 4**

p. 201 Prob. 4.87      Add the following information: "The equilibrium solubility of water is given by  $\alpha = 3 \text{ mg H}_2\text{O/cm}^3$  polymer-torr water vapor pressure"

**Chapter 5**

p. 237      Eq. 5.4.21 should read:       $2H(x) = 2H_0 - x \tan \theta = 5 - 0.176 x$

p. 238      Second line below Eq. 5.4.22:

Change  $7 \times 10^{-5}$  to  **$9.2 \times 10^{-5}$**  and    change     $3.1 \times 10^{-9}$  to  **$1.9 \times 10^{-9}$**

p. 243      Eq. 5.5.34      Put a *minus* sign in front of  $N_1$ .

p. 249      Prob. 5.33 (Part a)

Change "Do this for Reynolds numbers in the range  $10 < \text{Re} < 1000$ "

to "Do this for **mass flows** in the range  **$50 < \dot{m} < 500$  [kg/h]**"

## Chapter 6

p. 295      Prob. 6.10      Eq. P6.10 should read:

$$\frac{v_{y,\delta}}{v_o} = -\frac{5}{8} \frac{d\delta}{dx}$$

## Chapter 7

p. 328      Just above the last paragraph.  
Change "(See Problem 7.6)" to "(See Problem 7.7)"

p. 332      Prob. 7.5 (line 3) Change "coefficients" to "coefficient."

p. 333      Prob. 7.14      last line of column  
Change (1.25% CO<sub>2</sub>) to (**1.3%** CO<sub>2</sub>)

Prob. 7.15      Eq. P7.15.3 should be written  $c^* = p/m$       (not p/H)

## Chapter 11

p. 432      Prob. 11.35 (last line) "properties are given in Problem 11.34"

## Chapter 12

p. 460      2 lines above Eq. 12.5.24      Change "Prob. 12.17" to "Prob. 12.21"

**Chapter 15** In correcting the text on p. 606, Eq. 15.3.27 has a typo. The parenthetical expression should read (-4 St L/D), not (-4 ST L/D).

## Appendix B and C

p. 651      App. B Add just before Section B3

For large arguments it is useful to know that

$$\operatorname{erfc}(x) = \frac{1}{\sqrt{\pi}} \frac{e^{-x^2}}{x} \quad (\text{B2.10})$$

I have found one new error. On p. 128, line just above Eq. 4.2.98, change B26 to B2.5

Also, note that on p. x (Table of Contents) items 3.3, 3.4, and 3.5 should be boldfaced.