

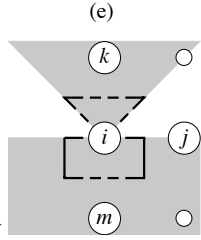
AMCHT CORRECTIONS LIST

21 September 2008

This document lists errors that have been found in the textbook and/or corrections that should be made in the next printing. There are two versions of this document. One is sorted by page number (to help locate corrections on a particular page); the other is sorted by date (to help locate the most recent corrections that have been added to the list).

Contributions to this list by other individuals are encouraged and are very much appreciated as they will improve future printings of the book. I hope to keep this document reasonably up-to-date. Email [myers@engr.wisc.edu] is the best way to contact me regarding corrections or to suggest improvements for the book.

Date	Page	Location	Correction
2008-03-19	171	5 lines up	Change “complimentary” to “complementary”.
2008-03-19	171	3 lines up	Change “complimentary” to “complementary”.
2008-03-19	173	Line 16	Change “complimentary” to “complementary”.
2008-03-19	398	Table J•7, Line 8	Change “complimentary” to “complementary”.
2008-03-19	404	Column 1, Line 35	Change “complimentary” to “complementary”.
2008-03-19	404	Column 1, Line 35	Change “171–172” to “171–173”.
2008-03-19	405	Column 1, Line 35	Change “complimentary” to “complementary”.
2008-03-19	405	Column 1, Line 35	Change “171–172” to “171–173”.
2008-03-01	7	Figure 1•15	Add curved arrow to indicate angle ϕ .
2008-03-01	13	Line 2	Change “temperature to into” to “temperature t_0 into”.
2008-03-01	66	Footnote	Change “ $a \times b$ ” to “ $a \leq x \leq b$ ”
2008-03-01	68	Figure 3•9	In figure caption, delete extra space by changing “0 to” to “0 t_0 ”.
2008-03-01	90	3 lines up	Change “equal to $L/2$ ” to “given by $(3 \cdot 1 \cdot 65)$ ”.
2008-03-01	90	Last line	Delete “solve for $A_m(\theta)$ and”.
2008-03-01	91	Entire page	Error on page 90 (3 lines up) caused revision of page 91.
2008-03-01	92	Entire page	Error on page 90 (3 lines up) caused revision of page 92.
2008-03-01	117	Figure 3•42	In figure caption, change <i>Infinitely</i> to <i>Infinitely</i>
2008-03-01	144	7 lines up	Change $(4 \cdot 2 \cdot 5)$ to $(4 \cdot 2 \cdot 3)$.
2008-03-01	207	Figure 8•11	In figure caption, change <i>Node i</i> to <i>Node i</i> .
2008-03-01	208	Figure 8•13	In figure caption, change <i>Node i</i> to <i>Node i</i> .
2008-03-01	259	11 lines up	Change $x[\exp(-\lambda\theta)]^{v+1}$ to $x[\exp(-\lambda\Delta\theta)]^{v+1}$

Date	Page	Location	Correction
2008-03-01	272	Lines 6, 7 and 11	Change (8·2·24) to (8·2·27).
2008-03-01	279	Figure 8•44(e)	 <p>Complete the system boundary as shown by</p>
2008-03-01	316	Line 3	Change (8·2·29) to (8·2·33).
2008-03-01	369	Line 14	<p>Replace $\int_{x=0}^1 x J_k(ax) J_k(bx) dx = \frac{ab}{2k} \frac{J_{k+1}(a)J_{k-1}(b) - J_{k-1}(a)J_{k+1}(b)}{a^2 - b^2}$</p> <p>with $\int x J_k(ax) J_k(bx) dx = \frac{x}{a^2 - b^2} [a J_{k+1}(ax) J_k(bx) - b J_k(ax) J_{k+1}(bx)]$</p> <p style="text-align: center;">$a \neq b$</p>
2008-03-01	379	Column 2, Line 1	Change 70 F to 30 F.
2008-03-01	380	Column 1, Line 9	Change $h = 1200$ to $h = 1200$. That is, h should be italic.
2001-10-01	7	Figure 1•16	Touch up figure by erasing three faint lines.
2001-10-01	8	(1·1·15)	Align equation number with the equation.
2001-10-01	23	Exercise 1•19	<p>Revise the wording of the first paragraph of this exercise to the following:</p> <p>1•19 The use of a lumped-system analysis assumes that the internal temperature difference is small. An estimate of the maximum temperature difference can be made by assuming a quadratic internal temperature distribution that has zero slope at the center of the lumped system. At the surface of the lumped system, equate the convection heat-transfer rate to the conduction heat-transfer rate. Compare the internal and external temperature differences.</p>
2001-10-01	113	Above Figure 3•38	Delete the extraneous 3.
2001-10-01	113	Figure 3•38	Use bold dots to indicate the three roots.
2001-10-01	116	Line 3	Change $\Theta(\theta) = \exp(-\lambda^2 \theta)$ to $\Theta(\theta) = \exp(-\lambda^2 \alpha \theta)$.
2001-10-01	116	(3·3·35)	Insert α before the θ on the right-hand side.
2001-10-01	117	(3·3·36)	Insert α before the θ on the right-hand side.
2001-10-01	118	(3·3·48)	Insert α before the θ on the right-hand side.
2001-10-01	118	Figure 3•44	Use bold dots to indicate the four roots.
2001-10-01	119	(3·3·60)	Insert α before the θ on the right-hand side.

Date	Page	Location	Correction
2001-10-01	120	Next to last equation	Insert α before the θ on the right-hand side.
2001-10-01	120	Last equation	Insert α before the θ on the right-hand side.
2001-10-01	138	Exercise 3•44	In the last line, change $t(x,\theta)$ to $t(x,y)$.
2001-10-01	146	Last three equations	Replace $t(x,\theta)$ by $u(x,\theta)$ on the left-hand side of each of the three equations.
2001-10-01	147	Exercise 4•5, Col. 2	Insert a + sign in $t^{(0)}a\theta$ to give $t^{(0)} + a\theta$ for $t(L,\theta)$ for $0 \leq \theta \leq \theta_1$.
2001-10-01	169	3 lines up	Change B to B .
2001-10-01	207	Figure 8•10	Figure caption should be italic.
2001-10-01	207	Figure 8•11	Figure caption should be italic.
2001-10-01	208	Figure 8•12	Figure caption should be italic.
2001-10-01	209	Figure 8•14	Figure caption should be italic.
2001-10-01	296	Figure 9•6	Change “Area” to “Triangular” in the figure caption.
2001-10-01	340	(9•5•15)	Replace \mathbf{z} by \mathbf{v} in two denominators.
2001-10-01	358	Column 1, last figure	Complete the circle around the letter k .
2001-10-01	369	Line 18	Change $C_k(x) = aJ_k(x) + bY_k(x)$ to $C_k(x) = AJ_k(x) + BY_k(x)$.
2001-10-01	369	Line 18	Change $\bar{C}_k(x) = \bar{a}J_k(x) + \bar{b}Y_k(x)$ to $\bar{C}_k(x) = \bar{A}J_k(x) + \bar{B}Y_k(x)$.
2001-10-01	369	Line 19	Change a, b, \bar{a} and \bar{b} to A, B, \bar{A} and \bar{B} .
2001-10-01	371	Figure D•1	Curve should be darker.
2001-10-01	372	Figure D•2	Curve should be darker.
2001-10-01	372	Figure D•2	Curve should be darker. <i>Note:</i> The eigenvalues for a sphere with a convective surface may be found from the roots of: $\lambda \cos(\lambda) + (H_{sphere} - 1) \sin(\lambda) = 0$ where $H_{sphere} = hr_o / k$. The first six nonzero roots may be obtained from Table D•2 by taking $H = H_{sphere} - 1$.
2001-10-01	373	Figure D•3	Curves should be darker.
2001-10-01	373	Figure D•4	Curve should be darker.
2001-10-01	376	Figure 2	Main heater did not print correctly. [I think this may have been due to using a fill pattern in the figure instead of drawing the diagonal lines myself.]

Date	Page	Location	Correction
2001-10-01	378	Column 1, Line 4	A value of $\mu = 0.10$ may be a little better choice for the coefficient of friction.
2001-10-01	400	Table K•3	Change the entries for Teflon to the following: Teflon® FEP film 0.113 134 0.28 0.0030
2001-10-01	401	Table K•4	Replace α by $\alpha \times 10^6$ in header.
2001-10-01	401	Table K•5	Replace α by $\alpha \times 10^6$ in header.
2001-10-01	402	Table K•6	Replace α by $\alpha \times 10^6$ in header.
2001-10-01	402	Table K•6	Change the entries for Teflon to the following: Teflon® FEP film 0.195 2150 1172 0.077
2001-10-01	403	Column 1, Line 16	Delete “Answers to exercises, 390–410”.
2001-10-01	404	Column 1, 8 lines up	Change “values of, 417–420” to “values of, 399–402”.
2001-10-01	404	Column 3, Line 11	Change “Density, values of, 417–420” to “Density, values of, 399–402”.
2001-10-01	404	Column 3, Line 31	Change “values of, 417–420” to “values of, 399–402”.
2001-10-01	404	Column 3, Line 32	Change “Dimensions of symbols, 411–413, 416” to “Dimensions of symbols, 394–396, 398”.
2001-10-01	404	Column 3, 21 lines up	Change “Economy-banded storage, 230–231, 421” to “Economy-banded storage, 230–231, 390”.
2001-10-01	405	Column 1, 14 lines up	Delete “Exercise answers, 390–410”.
2001-10-01	406	Column 3, 28 lines up	Change “Nomenclature, list of, 411–416” to “Nomenclature, list of, 394–398”.
2001-10-01	407	Column 1, Line 25	Change “Notation, list of, 411–416” to “Notation, list of, 394–398”.
2001-10-01	407	Column 3, Line 28	Change “Properties, values of, 417–420” to “Properties, values of, 399–402”.
2001-10-01	408	Column 1, Line 6	Delete “answers to chapter exercises, 390–410”.
2001-10-01	408	Column 1, Line 10	Change “notation, list of, 411–416” to “notation, list of, 394–398”.
2001-10-01	408	Column 2, 10 lines up	Change “Specific heat, values of, 417–420” to “Specific heat, values of, 399–402”.
2001-10-01	408	Column 3, Line 20	Change “transient, 100–109, 236–238, 245–247” to “transient, 100–109, 236–238, 245–247”.
2001-10-01	408	Column 3, 15 lines up	Change “Symbols, list of, 411–416” to “Symbols, list of, 394–398”.
2001-10-01	409	Column 1, Line 3	Change “values of, 417–420” to “values of, 399–402”.

Date	Page	Location	Correction
2001-10-01	409	Column 1, Line 6	Change “values of, 417–420” to “values of, 399–402”.
2001-10-01	409	Column 1, Line 7	Change “Thermal properties, tables of, 417–420” to “Thermal properties, tables of, 399–402”.
2001-10-01	409	Column 2, 2 lines up	Change “Units of symbols, 411” to “Units of symbols, 394”.