Errata for Electric Machinery Fundamentals 3/e

(Current at 29 January 2001)

Please note that some or all of the following errata may be corrected in future reprints of the book, so they may not appear in your copy of the text.

1. Page 8, Equation (1-18) is incorrect. The "$d\mathbf{I}$" should be "$d\mathbf{l}$":

$$\oint \mathbf{H} \bullet d\mathbf{l} = I_{\text{net}}$$

2. Page 61, fourth line from bottom should read "voltage and current angles are unaffected by an ideal transformer, $q_P = q_S = q$"

3. Page 68, Figure 2-8, the legend on the voltage source should read "$v_P(t)$"

4. Page 77, line 2: "produces a voltage e_{LP} given by"

5. Page 78, Figure 2-16: The legends on the two series reactances should be "jX_P" and "jX_S".

6. Page 82, Example 2-2, in the table, the open-circuit power should be $P_{\text{OC}} = 400$ W

7. Page 95, Figure 2-29 caption: "The **transformer** equivalent circuit …"

8. Page 122, Equation (2-90): The right hand side of the equation was inverted:

$$\frac{V_{\text{LP}}}{V_{\text{LS}}} = \frac{a}{\sqrt{3}}$$

9. Page 133, Problem 2-2: This problem states that R_S = 0.05 Ω and R_S = 0.06 Ω. This *should* be R_S = 0.05 Ω and X_S = 0.06 Ω.

$$\frac{V_{\text{LP}}}{V_{\text{LS}}} = \frac{a}{\sqrt{3}}$$

10. Page 118, Equations (2-97) and (2-98):

$$P_1 = V_f I_f \cos(150° - 120°)$$
$$P_1 = V_f I_f \cos 30°$$
$$P_1 = \frac{\sqrt{3}}{2} V_f I_f$$

and

$$P_2 = V_f I_f \cos(30° - 60°)$$
$$P_2 = V_f I_f \cos(-30°)$$
$$P_2 = \frac{\sqrt{3}}{2} V_f I_f$$

11. Page 279, Example 5-3, part *(d)*, w_{m} was incorrect:

$$t_{\text{app}} = \frac{P_{\text{in}}}{w_{\text{m}}} = \frac{36.6 \text{ kW}}{104.7 \text{ rad/s}} = 349.6 \text{ N•m}$$

and

$$t_{\text{ind}} = \frac{P_{\text{out}}}{w_{\text{m}}} = \frac{34.1 \text{ kW}}{104.7 \text{ rad/s}} = 325.7 \text{ N•m}$$

12. Page 365, top of page, typo in value of slip:

$$n_m = (1 - s) n_{\text{sync}}$$
$$n_m = (1 - 0.05)(1800 \text{ r/min}) = 1710 \text{ r/min}$$

13. Page 368, Equation (7-12):

$$\mathbf{I}_R = \frac{s\mathbf{E}_{Ro}}{R_R + jsX_{Ro}}$$

14. Page 370, last line. The cross reference is to Section 7.11, *not* 7.7.

15. Page 373, Equation (7-24), V_2 / s should be R_2 / s:

$$Z_{\text{eq}} = R_1 + jX_1 = \frac{1}{G_C - jB_M + \dfrac{1}{R_2 / s + jX_2}}$$

16. Page 425, Figure 7-49*b*, cross reference should be to Figure 7-42*b*.

17. Page 425, Figure 7-50*b*, cross reference should be to Figure 7-42*b*.

18. Page 425, Figure 7-51*b*, cross reference should be to Figure 7-42*b*.

19. Page 500, Figure 8-39*b*, the output power equation should be $P_{\text{out}} = t_{\text{app}} w_m$. "$P_{\text{in}}$" appears in this equation by mistake.

20. Page 566, Example 9-8*b*, the efficiency equation should be

$$h = \frac{P_{\text{out}}}{P_{\text{in}}} \times 100\%$$

21. Page 677, Segment *cd* near the bottom of the page. Incorrect subscripts on equation, and incorrect minus signs. Corrected equation is:

$$e_{dc} = (\mathbf{v} \times \mathbf{B}) \bullet \mathbf{l}$$
$$e_{dc} = vBl \quad \text{directed out of the page}$$
$$e_{dc} = vB_M \cos\left[w_m t - \left(90° - \frac{r}{2}\right)\right] l$$
$$e_{dc} = vB_M l \cos\left(w_m t - 90° + \frac{r}{2}\right)$$