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— Note —

CORRECTION TO THE PAPER "RATE EQUATIONS FOR TRACER STUDIES IN RECIRCULATING REACTORS" BY JOHN HAPPEL[1)]

By

John HAPPEL*)

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The present author discovered two errors in his note[1)]. Equation (13) should read:

$$\lambda = \frac{1}{2}\left[-\left(\frac{Wv_1}{\beta C^{A}} + \frac{v_1+v_2}{C^{Al}} + \frac{Wv_2}{\beta C^{B}}\right) \pm \sqrt{\left(\frac{Wv_1}{\beta C^{A}} + \frac{v_1+v_2}{C^{Al}} + \frac{Wv_2}{\beta C^{B}}\right)^2 - 4\left(\frac{Wv_1v_2}{\beta C^{A}C^{Al}} + \frac{W^2v_1v_2}{\beta^2 C^{A}C^{B}} + \frac{Wv_1v_2}{\beta C^{Al}C^{B}}\right)}\right]$$

Equation (16) should read:

$$z^{B} = C_1\left[\left(\frac{C^{Al}\lambda_1}{v_2} + \frac{v_1+v_2}{v_2}\right)\left(\frac{\beta C^{A}}{Wv_1}\lambda_1+1\right) - \frac{v_1}{v_2}\right]e^{\lambda_1 t} + C_2\left[\left(\frac{C^{Al}\lambda_2}{v_2} + \frac{v_1+v_2}{v_2}\right)\left(\frac{\beta C^{A}}{Wv_1}\lambda_2+1\right) - \frac{v_1}{v_2}\right]e^{\lambda_2 t} + C_3$$

With these corrections, it is then possible to compute the values of C_1, C_2 and C_3 from Equations (14)–(16) by specifying three initial values of concentration z_0^{A}, z_0^{Al} and z_0^{B}. Equation (17) is not an independent additional relationship.

1) J. HAPPEL, This Journal, **22**, 206 (1975).

*) Department of Chemical Engineering, Columbia University in the City of New York, New York.