

Erratum

Optimization of Nylon 6 Reactors with End-Point Constraints

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In Table III, under Increment in $T(t)^{30,31}$, the equation should be corrected to

$$\delta T(t) = - \left[\frac{\partial f_1}{\partial T}, \frac{\partial f_2}{\partial T}, \dots, \frac{\partial f_n}{\partial T} \right] \left\{ \begin{bmatrix} \lambda_{1,1} \\ \lambda_{2,1} \\ \vdots \\ \lambda_{n,1} \end{bmatrix} - \begin{bmatrix} \lambda_{1,2} & \lambda_{1,3} \\ \lambda_{2,2} & \lambda_{2,3} \\ \vdots & \vdots \\ \lambda_{n,2} & \lambda_{n,3} \end{bmatrix} \mathbf{I}_{\psi}^{-1} \begin{bmatrix} I_{\psi I,1,1} \\ I_{\psi I,2,1} \end{bmatrix} \right\} \\ * \left\{ \frac{r^2 - [\delta_{\psi_1}, \delta_{\psi_2}] \mathbf{I}_{\psi}^{-1} \begin{bmatrix} \delta_{\psi_1} \\ \delta_{\psi_2} \end{bmatrix}}{I_{II} - \mathbf{I}_{\psi I}^T \mathbf{I}_{\psi}^{-1} \mathbf{I}_{\psi I}} \right\}^{1/2} + \left[\frac{\partial f_1}{\partial T}, \dots, \frac{\partial f_n}{\partial T} \right] [\dots] \dots$$

where

$$I_{II} = \int_0^{t_f} [\lambda_{1,1}, \lambda_{2,1}, \dots, \lambda_{n,1}] \begin{bmatrix} \partial f_1 / \partial T \\ \partial f_2 / \partial T \\ \vdots \\ \partial f_n / \partial T \end{bmatrix} [\partial f_1 / \partial T, \dots, \partial f_n / \partial T] \begin{bmatrix} \lambda_{1,1} \\ \lambda_{2,1} \\ \vdots \\ \lambda_{n,1} \end{bmatrix} dt$$

and superscript T represents the transpose of the matrix. Values of $r \sim 0.002$ were used.