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CORRECTION

Correction to: Configuration optimization of the feature-oriented reference system in large component assembly

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The original article contained a mistake.
The symbol "L" and "K" should be replaced with ellipsis "⋯".

Section 2.1:

$$ {}^{M}\tau_i^{ax} = \min\left\{ {}^{F1}k_i^{ax}F1\tau_i^{ax}, {}^{F2}k_i^{ax}F2\tau_i^{ax}, L, {}^{Fj}k_i^{ax}Fj\tau_i^{ax} \right\}(ax = x, y, z) \tag{2} $$

Section 2.3.2:

$$ \boldsymbol{\Delta}^T \mathbf{W} \boldsymbol{\Delta} \le \boldsymbol{\Lambda}^T \boldsymbol{\Lambda} \tag{19} $$

in which $\boldsymbol{\Delta} = diag(\Delta\mathbf{g}, \Delta\mathbf{d}^g, \Delta\mathbf{d}^s, \Delta\mathbf{d}^h, \Delta\mathbf{d}^{ef}, \Delta\mathbf{d}^{mp}, \Delta\boldsymbol{\varphi})$.

$\Delta\mathbf{g} = diag(\Delta\mathbf{g}_1, L, \Delta\mathbf{g}_{n_1}, \Delta\mathbf{g}_{n_1+1}, L, \Delta\mathbf{g}_{n_1+n_2})$,
$\Delta\mathbf{d}^g = diag\left(\Delta d_1^g, K, \Delta d_{n_3}^g\right)$, $\Delta\mathbf{d}^s = diag\left(\Delta d_1^s, K, \Delta d_{n_4}^s\right)$,
$\Delta\mathbf{d}^h = diag\left(\Delta d_1^h, K, \Delta d_{n_5}^h\right)$,
$\Delta\mathbf{d}^{ef} = diag\left(\Delta d_1^{ef}, K, \Delta d_{n_6}^{ef}\right)$,
$\Delta\mathbf{d}^{mp} = diag\left(\Delta d_1^{mp}, K, \Delta d_{n_7}^{mp}\right)$,
and $\Delta\boldsymbol{\varphi} = diag(\Delta\varphi_1, K, \Delta\varphi_{n_8})$. $\mathbf{W}$ and $\boldsymbol{\Lambda}$ are in the forms of:

$$ \mathbf{W} = diag\left(\mathbf{w}_{\mathbf{g}_1}, L, \mathbf{w}_{\mathbf{g}_{n_1}}, \mathbf{w}_{\mathbf{g}_{n_1+1}}, K, \mathbf{w}_{\mathbf{g}_{n_1+n_2}}, \mathbf{w}_{\Delta d^g}, \mathbf{w}_{\Delta d^s}, \mathbf{w}_{\Delta d^h}, \mathbf{w}_{\Delta d^{ef}}, \mathbf{w}_{\Delta d^{mp}}, \mathbf{w}_{\Delta\varphi}\right) \tag{20} $$

$$ \boldsymbol{\Lambda} = diag\left({}^{M}\boldsymbol{\Lambda}_1, L, {}^{M}\boldsymbol{\Lambda}_{n_1}, \frac{{}^{M}\boldsymbol{\Lambda}_{n_1+1}}{2}, L, \frac{{}^{M}\boldsymbol{\Lambda}_{n_1+n_2}}{2}, \boldsymbol{\Lambda}_{\Delta d^g}, \boldsymbol{\Lambda}_{\Delta d^s}, \boldsymbol{\Lambda}_{\Delta d^h}, \boldsymbol{\Lambda}_{\Delta d^{ef}}, \boldsymbol{\Lambda}_{\Delta d^{mp}}, \boldsymbol{\Lambda}_{\Delta\varphi}\right) \tag{21} $$

where $\boldsymbol{\Lambda}_{\Delta d^g} = diag(0.05, L, 0.05)$, $\boldsymbol{\Lambda}_{\Delta d^s} = diag(0.05, L, 0.05)$,
$\boldsymbol{\Lambda}_{\Delta d^h} = diag\left(\frac{k_1^c \tau_1^c}{2}, L, \frac{k_{n_5}^c \tau_{n_5}^c}{2}\right)$,
$\boldsymbol{\Lambda}_{\Delta d^{ef}} = diag\left(\frac{k_1^{ef} \tau_1^{ef}}{2}, L, \frac{k_{n_6}^{ef} \tau_{n_6}^{ef}}{2}\right)$,
$\boldsymbol{\Lambda}_{\Delta d^{mp}} = diag\left(\frac{k_1^{mp} \tau_1^{mp}}{2}, L, \frac{k_{n_7}^{mp} \tau_{n_7}^{mp}}{2}\right)$,
and $\boldsymbol{\Lambda}_{\Delta\varphi} = diag\left(k_1^{\varphi}\tau_1^{\varphi}, L, k_{n_8}^{\varphi}\tau_{n_8}^{\varphi}\right)$. w_i is equal to 0 or 1.

Section 2.4:

$$ \min f(\mathbf{g}_1, \mathbf{g}_2, L, \mathbf{g}_N) = \sum_{st=1}^{ST} \sum_{i=1}^{N} {}^{st}a_i \left\| \mathbf{g}_i - {}^{st}\mathbf{p}'_i \right\|^2 \tag{22} $$

Section 2.4:

$$ f(\mathbf{g}_1, \mathbf{g}_2, L, \mathbf{g}_N) = \sum_{i=1}^{N} \left\| \mathbf{g}_i - \mathbf{p}''_i \right\|^2 + \beta \sum_{i=1}^{m} \max(0, \mathbf{Q}_{ii}) \tag{23} $$

Section 3:

$$ N_1 + N_2 + L + N_m \ge N \ (3 < N_{st} \le N) \tag{24} $$

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Section 3:

where t_{ax} is the binary digits, and let $b_{t_{ax}}^{ax} \mathrm{L} b_3^{ax} b_2^{ax} b_1^{ax}$ $(ax = x, y, z)$ represent the coordinate component. The conversion between them is:

$$g^n = g_{\min}^{ax} + \left(g_{\max}^{ax} - g_{\min}^{ax}\right) * \sum_{i=1}^{t_{ax}} b_i^{ax} \cdot 2^{i-1} / \left(2^{t_{ax}} - 1\right) \quad (25)$$

The corresponding binary value of point $\mathbf{g}_j$ is $\mathbf{b}_j = \mathbf{b}_j^x \mathbf{b}_j^y \mathbf{b}_j^z$, and the particle is $\mathbf{x} = [\mathbf{b}_1, \mathbf{b}_2, \mathrm{L}, \mathbf{b}_N]$.

Section 3.2:

$$\mathbf{L} = \mathbf{S} - \mathbf{D} \quad (31)$$

where $\mathbf{D} = diag\,(d_1, d_2, \mathrm{L}, d_n)$.

Section 3.2:

$$\mathbf{V} = [\mathbf{v}_1, \mathbf{v}_2, \mathrm{L}, \mathbf{v}_{k_1}] \quad (32)$$

The correct equations should be the below:

Section 2.1:

$$^{M}\tau_i^{ax} = \min\left\{^{\mathrm{F1}}k_i^{ax}\mathrm{F1}\tau_i^{ax}, ^{\mathrm{F2}}k_i^{ax}\mathrm{F2}\tau_i^{ax}, \cdots, ^{\mathrm{Fj}}k_i^{ax}\mathrm{Fj}\tau_i^{ax}\right\} (ax = x, y, z) \quad (2)$$

Section 2.3.2:

$$\mathbf{\Delta}^T \mathbf{W} \mathbf{\Delta} \leq \mathbf{\Lambda}^T \mathbf{\Lambda} \quad (19)$$

in which $\mathbf{\Delta} = diag\,(\mathbf{\Delta g}, \mathbf{\Delta d}^g, \mathbf{\Delta d}^s, \mathbf{\Delta d}^h, \mathbf{\Delta d}^{ef}, \mathbf{\Delta d}^{mp}, \mathbf{\Delta \varphi})$. $\mathbf{\Delta g} = diag\left(\Delta\mathbf{g}_1, \cdots, \Delta\mathbf{g}_{n_1}, \Delta\mathbf{g}_{n_1+1}, \cdots, \Delta\mathbf{g}_{n_1+n_2}\right)$, $\mathbf{\Delta d}^g = diag\left(\Delta d_1^g, \cdots, \Delta d_{n_3}^g\right)$, $\mathbf{\Delta d}^s = diag\left(\Delta d_1^s, \cdots, \Delta d_{n_4}^s\right)$, $\mathbf{\Delta d}^h = diag\left(\Delta d_1^h, \cdots, \Delta d_{n_5}^h\right)$, $\mathbf{\Delta d}^{ef} = diag\left(\Delta d_1^{ef}, \cdots, \Delta d_{n_6}^{ef}\right)$, $\mathbf{\Delta d}^{mp} = diag\left(\Delta d_1^{mp}, \cdots, \Delta d_{n_7}^{mp}\right)$, and $\mathbf{\Delta \varphi} = diag\left(\Delta\varphi_1, \cdots, \Delta\varphi_{n_8}\right)$. $\mathbf{W}$ and $\mathbf{\Lambda}$ are in the forms of:

$$\mathbf{W} = diag\left(\mathbf{w}_{\mathbf{g}_1}, \cdots, \mathbf{w}_{\mathbf{g}_{n_1}}, \mathbf{w}_{\mathbf{g}_{n_1+1}}, \cdots, \mathbf{w}_{\mathbf{g}_{n_1+n_2}}, \mathbf{w}_{\Delta d^g}, \mathbf{w}_{\Delta d^s}, \mathbf{w}_{\Delta d^h}, \mathbf{w}_{\Delta d^{ef}}, \mathbf{w}_{\Delta d^{mp}}, \mathbf{w}_{\Delta\varphi}\right) \quad (20)$$

$$\mathbf{\Lambda} = diag\left({}^M\mathbf{\Lambda}_1, \cdots, {}^M\mathbf{\Lambda}_{n_1}, \frac{{}^M\mathbf{\Lambda}_{n_1+1}}{2}, \cdots, \frac{{}^M\mathbf{\Lambda}_{n_1+n_2}}{2}, \mathbf{\Lambda}_{\Delta d^g}, \mathbf{\Lambda}_{\Delta d^s}, \mathbf{\Lambda}_{\Delta d^h}, \mathbf{\Lambda}_{\Delta d^{ef}}, \mathbf{\Lambda}_{\Delta d^{mp}}, \mathbf{\Lambda}_{\Delta\varphi}\right) \quad (21)$$

where $\mathbf{\Lambda}_{\Delta d^g} = diag(0.05, \cdots, 0.05)$, $\mathbf{\Lambda}_{\Delta d^s} = diag(0.05, \cdots, 0.05)$, $\mathbf{\Lambda}_{\Delta d^h} = diag\left(\frac{k_1^c \tau_1^c}{2}, \cdots, \frac{k_{n_5}^c \tau_{n_5}^c}{2}\right)$, $\mathbf{\Lambda}_{\Delta d^{ef}} = diag\left(\frac{k_1^{ef} \tau_1^{ef}}{2}, \cdots, \frac{k_{n_6}^{ef} \tau_{n_6}^{ef}}{2}\right)$, $\mathbf{\Lambda}_{\Delta d^{mp}} = diag\left(\frac{k_1^{mp} \tau_1^{mp}}{2}, \cdots, \frac{k_{n_7}^{mp} \tau_{n_7}^{mp}}{2}\right)$, and $\mathbf{\Lambda}_{\Delta\varphi} = diag\left(k_1^{\varphi}\tau_1^{\varphi}, \cdots, k_{n_8}^{\varphi}\tau_{n_8}^{\varphi}\right)$. w_i is equal to 0 or 1.

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The original article has been corrected.