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COMMENTS AND CORRECTIONS

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There is an error in the above article [1] when the components of the second order magnetostriction strain tensor $\boldsymbol{\epsilon}_{\alpha}^{\mu(2)}$ are introduced in section II.B, just before equation (14). It is stated that, in the case of a uniaxial stress tensor applied parallel to the magnetic field (direction 1), the only non-null component of $\boldsymbol{\epsilon}_{\alpha}^{\mu(2)}$ is $\epsilon_{\alpha_{11}}^{\mu(2)}$. Although the expression given for $\epsilon_{\alpha_{11}}^{\mu(2)}$ by (14) in [1] is correct, the 11 component is not the only non-null component of $\boldsymbol{\epsilon}_{\alpha}^{\mu(2)}$. The general expression of $\boldsymbol{\epsilon}_{\alpha}^{\mu(2)}$ is given by equation (1) below:

$$\begin{aligned}\boldsymbol{\epsilon}_{\alpha}^{\mu(2)} &= -\frac{\partial g_{\alpha}^{el(2)}}{\partial \boldsymbol{\sigma}} \\ &= \frac{9}{2}\lambda_s'\sigma_{eq}\left[\left(\vec{\alpha}\otimes\vec{\alpha}-\frac{1}{3}\boldsymbol{I}\right):\left(\vec{h}\otimes\vec{h}\right)\right]\left(\vec{h}\otimes\vec{h}-\frac{1}{3}\boldsymbol{I}\right)\end{aligned} \tag{1}$$

The particular case considered in [1], with $\vec{h} = [1\ 0\ 0]^t$ and $\boldsymbol{\sigma} = \sigma_{11}\left(\vec{h}\otimes\vec{h}\right)$ yields:

$$\begin{aligned}\epsilon_{\alpha_{11}}^{\mu(2)} &= 3\lambda_s'\sigma_{11}\left({\alpha_1}^2-\frac{1}{3}\right) \\ \epsilon_{\alpha_{22}}^{\mu(2)} &= \epsilon_{\alpha_{33}}^{\mu(2)} = -\frac{3}{2}\lambda_s'\sigma_{11}\left({\alpha_1}^2-\frac{1}{3}\right) \\ \epsilon_{\alpha_{23}}^{\mu(2)} &= \epsilon_{\alpha_{13}}^{\mu(2)} = \epsilon_{\alpha_{12}}^{\mu(2)} = 0\end{aligned} \tag{2}$$

This error does not affect the following calculations presented in the article.

REFERENCES

[1] L. G. D. Silva, A. Abderahmane, M. Domenjoud, L. Bernard, and L. Daniel, "An extension of the vector-play model to the case of magneto-elastic loadings," *IEEE Access*, vol. 10, pp. 126674–126686, 2022.