ERRATA

Propagation of Magneto-elastic Waves in a Perfectly Conducting Plate Extending to Infinity in Vacuum

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The author regrets that some corrections are to be made in the results reported in his recent paper with the above title [1]²⁾.

In the second of equations (14) the exponential factor e^{qT} does not occur so that

$$\delta_3 = -\frac{k^2 V^2}{q c^2} \kappa_0 H^2.$$

The dispersion equations for symmetric and antisymmetric cases given by (15a, b) can be written as

$$\begin{aligned} & \frac{\tanh\left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} k T}{\tanh\left(1 - \frac{V^2}{\beta^2}\right)^{1/2} k T} \\ &= \frac{\left(2 - \frac{V^2}{\beta^2}\right) \left\{2 - \frac{V^2}{\beta^2} - \frac{V_A^2 V^2}{\beta^2 C^2} \left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} \left(1 - \frac{V^2}{c^2}\right)^{-1/2} \tanh\left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} k T\right\}}{4 \left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} \left(1 - \frac{V^2}{\beta^2}\right)^{1/2} \left\{1 - \frac{V_A^2 V^2}{2 \beta^2 c^2} \left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} \left(1 - \frac{V^2}{\beta^2}\right)^{1/2} \tanh\left(1 - \frac{V^2}{\beta^2}\right)^{1/2} k T\right\}}, \\ & \frac{\tanh\left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} k T}{\tanh\left(1 - \frac{V^2}{\beta^2}\right)^{1/2} k T} \\ &= \frac{4 \left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} \left(1 - \frac{V^2}{\beta^2}\right)^{1/2} \left\{1 - \frac{V_A^2 V^2}{\beta^2 c^2} \left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} \left(1 - \frac{V^2}{\beta^2}\right)^{1/2} \coth\left(1 - \frac{V^2}{\beta^2}\right)^{1/2} k T\right\}}{\left(2 - \frac{V^2}{\beta^2}\right) \left\{2 - \frac{V^2}{\beta^2} - \frac{V_A^2 V^2}{2 \beta^2 c^2} \left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} \left(1 - \frac{V^2}{c^2}\right)^{-1/2} \coth\left(1 - \frac{V^2}{\alpha^2 + V_A^2}\right)^{1/2} k T\right\}}. \end{aligned}$$

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²⁾ Number in brackets refer to Reference, page 254.

In all cases of acoustic wave propagation, the ratio $V_A V/\beta C$ is extremely small and, therefore, the radiation effect is negligible both for long waves and short waves. For symmetric waves, this is evident because of the fact that $\tanh\theta$ is finite and lies between 0 and 1 for all values of θ ; for antisymmetric waves the approximation can be seen to be justified after cross multiplication. It follows that the equations (16a) and (16b) hold without any restriction.

In equation (20) κ should replace κ_0 . In the third term in equation (21) and in σ_3 , κ_0 is to be changed to κ^2/κ_0 , and they should be read without the factor e^{iT} .

Noting that $\sigma_1 a = \sigma_2$, equations (22) and (23) reduce, respectively, to

$$e^{A_{ikb}T} = \left(\frac{\sigma_3 + i b \sigma_1}{\sigma_3 - i b \sigma_1} \right)^2$$

and

$$B_3 = A_3 e^{2ikbT} \frac{\sigma_1 b + i \sigma_3}{\sigma_1 b - i \sigma_3},$$

so that $B_3 = \pm A_3$ for all φ depending upon the mode, and (26) simplifies to $B_3 = (-1)^{m-1} A_3$.

REFERENCE

- [1] C. M. PURUSHOTHAMA, *Pure and Appl. Geophysics* 61 (1965/II), 60.

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