Comments on: Dyadic Green's function of a PEMC cylinder

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Dyadic Green's function is a valuable tool being employed in the study of scattering and radiation of electromagnetic waves. Various articles in scientific literature are available on this topic. Disfani et al. [1] have recently contributed an interesting paper dealing with dyadic Green's function of a PEMC cylinder. Unfortunately there are some typographical errors which cause difficulties in the understanding of their work. Typographical errors in [1] are removed and they are presented in error-free form. Error-free expressions are written below, each with same equation number as given in the paper [1].

$$\mathbf{M}_e^o{}_\eta(h) = \left[\mp \frac{n Z_n(\eta r)}{r} \frac{\sin(n\phi) \hat{r}}{\cos(n\phi)} - \frac{\partial Z_n(\eta r)}{\partial r} \frac{\cos(n\phi) \hat{\phi}}{\sin(n\phi)} \right] \times \exp(ihz) \quad (13)$$

$$\begin{aligned} \nabla \times (\mathbf{M}_\eta(h) \mathbf{M}'_\eta{}^{(1)}(-h) + \mathbf{N}_\eta(h) \mathbf{N}'_\eta{}^{(1)}(-h) + A_\eta \mathbf{M}_\eta{}^{(1)}(h) \\ + B_\eta \mathbf{N}_\eta{}^{(1)}(h)) + i\omega\mu_0 M (\mathbf{M}_\eta(h) \mathbf{M}'_\eta{}^{(1)}(-h) \\ + \mathbf{N}_\eta(h) \mathbf{N}'_\eta{}^{(1)}(-h) + A_\eta \mathbf{M}_\eta{}^{(1)}(h) + B_\eta \mathbf{N}_\eta{}^{(1)}(h)) \\ = 0 \end{aligned} \quad (17)$$

$$\begin{aligned} \mp \frac{ihn}{kr} [\mathbf{M}'_\eta{}^{(1)}(-h) J_n(\alpha) + A_\eta H_n(\alpha) \\ + i M \eta_0 (\mathbf{N}'_\eta{}^{(1)}(-h) J_n(\alpha) + B_\eta H_n(\alpha))] \\ - [\mathbf{N}'_\eta{}^{(1)}(-h) J'_n(\alpha) + B_\eta H'_n(\alpha) \\ + i M \eta_0 (\mathbf{M}'_\eta{}^{(1)}(-h) J'_n(\alpha) + A_\eta H'_n(\alpha))] = 0 \end{aligned} \quad (22)$$

References

1. M.R. Disfani, K. Vafi, M.S. Abrishamian, Dyadic Green's function of a PEMC cylinder. Appl. Phys. A (2011). doi:[10.1007/s00339-011-6248-9](https://doi.org/10.1007/s00339-011-6248-9)

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