Abstracts

Boundary Element Method Approach Magnetostatic Wave Problems

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In this paper, the technique for application of the boundary element method (BEM) to analysis of magnetostatic waves (MSW'S) is established. To show the availability of the technique, two types of waveguides for the MSW are studied one is a waveguide constituting a YIG slab shielded with metal plates and the other is a waveguide consisting of an unshielded YIG slab. With the former structure the results obtained by the present technique are compared with the analytical solutions, and with the latter the BEM is compared with Marcatili's approximate method since there is no analytical solution in this case. Those comparisons are performed successfully for both cases. The paper concludes that the BEM is useful and effective for analysis of a wide range of MSW problems.

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