Abstracts

Computation of the Irrotational Magnetic Eigenfunctions Belonging to Complex Cavities

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A method for the computation of irrotational magnetic eigenfunctions in complex cavities is presented. It is shown that the "TE/sub 00/ waveguide mode" has to be included in the analysis. For a simple cavity, it is analytically demonstrated that the irrotational magnetic eigenfunctions have to be taken into account in field expansion methods. Numerical results are given for some structures. The validity of the method is checked for a spherical cavity. Furthermore, it is shown how the numerical efficiency of the method can considerably be improved by a special subdivision of tapered sections.

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