BULETINUL INSTITUTULUI POLITEHNIC DIN IAŞI
Publicat de
Universitatea Tehnică „Gheorghe Asachi" din Iaşi
Tomul LV (LIX), Fasc. 2, 2009
Secţia
ELECTROTEHNICĂ. ENERGETICĂ. ELECTRONICĂ

SKIN EFFECT IN A CONDUCTING, LOSSY, PLATE, HAVING A RECTANGULAR SECTION, IN HARMONIC STEADY-STATE

BY

HUGO ROSMAN

Abstract. The expressions of complex vectors $\underline{\mathbf{J}}_l(x)$, $\underline{\mathbf{E}}_{intl}(x)$ and $\underline{\mathbf{H}}_{intl}(x)$ are established as well as of the active and reactive power in length's and width's unities of a conducting lossy, rectangular plate having a rectangular section, in harmonic steady-state. The expression of increase factor of the resistance in ac is determined too.

Key words: skin effect, conducting lossy plate, harmonic steady-state.

CYLINDRICAL STRUCTURE IN INCLINED ELECTRIC FIELD

BY

ADRIANA-ELENA PRISĂCARU, DELIA ANNE-MARIE ANDRONE and I. ANDRONE

Abstract. A cylindrical structure placed in an inclined electric field is examined. Starting from Maxwell equations the Laplace and Hemholtz equations are obtained and solved for different regions.

Key words: cylindrical structure; electric field, screening; ore bed; Maxwell equations; Hemholtz equations.