LORENTZ TYPE RECIPROCITY RELATIONS IN ELECTROMAGNETIC FIELDS, IN VARIABLE STATE

BY

HUGO ROSMAN

Some Lorentz type reciprocity relations in electromagnetic fields, evolving, in variable state, in a lossy, motionless, linear, non-homogeneous, isotropic, medium are established. The utilized proceeding associates Maxwell's equations to vectorial identities (2) and (3).

STUDY OF THE PROPAGATION OF TEM WAVES THROUGH AN ISOLATED LOSSY DIELECTRIC PLATE

BY

CAMELIA PETRESCU

The paper extends the study of the propagation of TEM waves through lossy dielectrics to the case when the wave encounters a lossy dielectric plate. The complex propagation constant is slightly modified in order to render real refraction angles. The expressions of the total reflection and refraction coefficients are established and the extreme cases of total reflection or refraction are analysed for a TEM wave with perpendicular polarization.

CYLINDRICAL SCREENING IN LONGITUDINAL MAGNETIC FIELD FOR ORE BED EXPLORATION ANTENNAS AND OTHER DEVICES

BY

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To protect the electric circuits and apparatus from effect of electromagnetic field and for accuracy of electric and magnetic measurements, very often a screen is used [3]. The knowledge of the screening effects is also necessary for accuracy measurements in electromagnetic ore bed exploration [7]. A cylindrical screen placed in longitudinal variable magnetic field is examined. The Maxwell's equations for different media are solved.

LES COEFFICIENTS DE TRANSFERT D'UN QUADRIPÔLE GÉNÉRAL LINÉARE, NON-AUTONOME, EN RÉGIME PERMANENT HARMONIQUE, DONT LE RÉCEPTEUR EST LINÉAIRE ET PASSIF

PAR

HUGO ROSMAN

On définit neuf coefficients de transfert d'un quadripôle général linéaire, non-autonome, en régime permanent harmonique, à savoir: trois coefficients de transfert de la tension, trois coefficients de transfert du courant et trois impédances de transfert. On établit leurs expressions et on détermine leurs domaines d'existence.