

THE ENERGY REGIME OF A GENERAL, LINEAR, NON-AUTONOMOUS AND PASSIVE TWO-PORT, SUPPLIED, SIMULTANEOUSLY, IN HARMONIC STEADY-STATE, AT THE GATES (1), (1') AND (2), (2'), HAVING BETWEEN THESE GATES A NON-LINEAR INERTIAL COUPLING COMPLEX IMPEDANCE

BY

HUGO ROSMAN

Abstract. The differential equation satisfied by function $X_3(R_3)$ is established, where $\underline{Z}_3 = R_3 + jX_3$ is the non-linear inertial coupling complex impedance between the gates (1), (1') and (2), (2') of a general, linear, non-autonomous and passive two-port supplied simultaneously at the gates (1), (1') and (2), (2'), so that either the active power dissipated in the coupling complex impedance, \underline{Z}_3 , or the efficiency of the transferred active power to this impedance have extreme values.

Key words: general, linear, non-autonomous and passive two-ports, simultaneously supplied at the gates (1), (1') and (2), (2'); non-linear inertial coupling impedance; extreme values of active power dissipated or of the efficiency of the transferred power to the coupling impedance.