PARAMETER VARIATION CONTINUED

IN THE LAST SECTION THE DIMENSIONAL RELATIONS OF CONDUCTANCE AND RESISTANCE WERE DEVELOPED FOR THE CONDITION OF A STATIC, OR STATIONARY, METALLIC - DIELECTRIC GEOMETRY. THE CONDUCTANCE REPRESENTS THE LEAKAGE OF ENERGY FROM THE DIELECTRIC FIELD, AND THE RESISTANCE REPRESENTS THE LEAKAGE OF ENERGY FROM THE MAGNETIC FIELD. ENERGY LOSS IS INTERNAL TO THE PHYSICAL MASS WHICH CONSTITUTES THE METALLIC-DIELECTRIC GEOMETRY. THIS LOSS IS OF MOLECULAR FORM.

INSTEAD OF THE PARAMETER VARIATION RESULTING FROM INTERNAL MOTIONS, THERE EXISTS THE PARAMETER VARIATION WHICH RESULTS FROM EXTERNAL MOTION. THIS PARAMETER VARIATION WITH RESPECT TO TIME IS THE RESULT OF THE

CONTIGUOUS PARTS OF THE GEOMETRIC FORM BEING IN RELATIVE MOTION WITH RESPECT TO EACH OTHER. AGAIN THE A. C. INDUCTION MOTOR SERVES AS AN EXAMPLE OF SUCH A GEOMETRIC STRUCTURE. HERE IS A METALLIC - DIELECTRIC GEOMETRIC STRUCTURE WITH RELATIVE MOTION BETWEEN ITS PHYSICAL PARTS. A MOTOR OR A GENERATOR OPERATE THRU PARAMETER VARIATION VIA ROTATIONAL MOTION. AN EXAMPLE IS THE COMMON "ELECTRO - STATIC" GENERATOR, SUCH AS THE "WIMHURST MACHINE", A ROTATING VARIABLE ELECTRO - STATIC CONDENSER.

IN GENERAL THE METALLIC - DIELECTRIC GEOMETRY DELIVERS MECHANICAL FORCE AS AN ELECTRIC MOTOR, OR IS DRIVEN BY MECHANICAL FORCE AS AN ELECTRIC GENERATOR. MECHANICAL / ELECTRICAL PARAMETER CHANGES, THESE AS,

FARAD PER SECOND AND HENRY PER SECOND, GIVE RISE TO THE METALLIC-DIELECTRIC GEOMETRY BECOMING AN ELECTRIC MOTOR, TAKING ENERGY FROM THE FIELD, OR BECOMING AN ELECTRIC GENERATOR, GIVING ENERGY TO THE FIELD.

IN THE CASE WHICH THE GEOMETRY IS TAKING ENERGY AS AN ELECTRIC MOTOR, IT IS FOR A DIELECTRIC MACHINE, A PARAMETRIC CONDUCTANCE, G, RESULTS,

(1) FARAD PER SECOND, OR SIEMENS, CONDUCTANCE, G,

AND FOR A MAGNETIC MACHINE, A PARAMETRIC RESISTANCE, R, RESULTS,

(2) HENRY PER SECOND, OR OHM, RESISTANCE, R.

R AND G HERE REPRESENT THE REMOVAL OF ENERGY FROM THE ELECTRIC FIELD, JUST AS WITH THE CONDITION OF MOLECULAR LOSSES.

FOR THE CONDITION OF A MECHANICALLY DRIVEN METALLIC-DIELECTRIC GEOMETRY GIVING ENERGY AS AN ELECTRIC GENERATOR, AN ALTERNATE FORM OF DIMENSIONAL EXPRESSION IS DESIERED. THESE EXPRESSIONS SERVE TO DISTINGUISH THAT PART OF THE RELATIONS WHICH REPRESENT THE LOSS OF ENERGY AS DISTINCT FROM THAT PART OF THE RELATIONS WHICH REPRESENT THE GAIN OF ENERGY. THE SQUARE ROOT OF POSITIVE ONE IS THE "OPERATOR" WHICH DISTINGUISHES THE GAIN PART FROM LOSS PART. IT IS SUPPLY, OR DEMAND.

THESE ALTERNATE DIMENSIONAL RELATIONS ARE, FOR THE DIELECTRIC FIELD,

(3) FARAD PER SECOND, OR SIEMENS, THE ACCEPTANCE, S

AND FOR THE MAGNETIC FIELD,

(4) HENRY PER SECOND, OR OHM, THE RECEPTANCE, H

HENCE, FOR THE DIELECTRIC MACHINE AN [ACCEPTANCE], S, IN SIEMENS, AND FOR A MAGNETIC MACHINE A [RECEPTANCE], H, IN OHM. WHERE R AND G REPRESENT ENERGY CONSUMPTION CO-EFFICIENTS, IT IS S AND H REPRESENT ENERGY PRODUCTION CO-EFFICIENTS.

A FEW OBSERVATIONS ARE IN ORDER HERE. FIRST, EXISTING TECHNOLOGY PRODUCES MACHINES WHICH ARE STRICTLY MAGNETIC, SUCH AS THE A.C. INDUCTION MOTOR, OR STRICTLY DIELECTRIC, SUCH AS THE WIMHURST MACHINE. NO MACHINE IS PRODUCED WHERE THE MAGNETIC AND ~~OR~~ THE DIELECTRIC FIELDS WORK TOGETHER IN AN ELECTRIC FIELD. WHAT RELATIONSHIP OF THE FORCES, POTENTIAL, e, AND M.M.F., i, GIVES RISE TO EQUAL AND OPPOSITE MECHANICAL FORCES, THIS NOW APPLIED TO A ROTATING GEOMETRY?

SECOND, NOT ALL PARAMETER CHANGES ARE THE RESULT OF MECHANICAL FORCES, NOR RANDOM MOLECULAR MOTIONS. THE MAGNETIC AMPLIFIER IS ONE SUCH CASE, HERE A PARAMETRIC INDUCTANCE CONTROLLED BY AN AUXILLIARY M.M.F.

ON THE MOLECULAR LEVEL, CERTAIN PLASMA DISCHARGE TUBES, SUCH AS THE COMMON FLOURECENT LIGHTING TUBES GIVE RISE TO AN ASSORTMENT OF PARAMETER VARIATIONS WHICH CAN PRODUCE AS WELL AS CONSUME ENERGY FROM THE ELECTRIC FIELD. HERE IS A VAST REALM FOR THEORY AND EXPERIMENT.

73 DE NGKPH