Corrigendum

Corrigendum to “Analysis of the Coupling Coefficient in Inductive Energy Transfer Systems”

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In the paper titled “Analysis of the Coupling Coefficient in Inductive Energy Transfer Systems” [1], Equation (16) is the voltage drop across the secondary coil and is written as

\[ V_1 = j\omega (I_2L_2 + MI_1). \] (16)

However, the correct expression is

\[ V_2 = j\omega (I_2L_2 + MI_1). \] (16)

In addition, the mutual inductance \( M \) in Equation (18) should be squared, resulting in

\[ V_1 = j\omega I_1 \left( L_1 - \frac{M^2}{L_2} \right). \] (18)

As a result, the mutual inductance in Equation (19) must also be corrected, yielding

\[ L_s = L_1 - \frac{M^2}{L_2}. \] (19)

Finally, the mutual inductance measured when the secondary coil is shorted, shown in Equation (21), should be written as

\[ M = \sqrt{L_2 (L_1 - L_s)}. \] (21)

Now, the substitution of Equation (21) in Equation (2) of [1] results in the expression given by Equation (22).

References
