

Euler's Coil Technology Experiment 6

Aim: To verify one of the premise of Euler' s CoilTechnology that energy supplied depending on the demand of the situation.

Hypothesis A:

Transformer is a device that transferring electrical energy from Primary Coil to Secondary Coil. For an ideal transformer:

<p style="font-size: small;">From Faraday's Law</p> $\frac{V_S}{V_P} = \frac{N_S}{N_P}$	<p style="font-size: small;">For ideal transformer</p> <p style="font-size: x-small;">The voltage ratio is equal to the turns ratio, and power in equals power out.</p>	<p style="font-size: small;">From conservation of energy</p> $P_P = V_P I_P = V_S I_S = P_S$
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Furthermore, if yet another transformer is connected to the system, the consequence would be the electrical power is transferred from the Primary to the last one. And the total amount of energy is fixed regardless of the demand of each components.

Hypothesis B:

First Round Induction from Primary coil to Secondary coil:

$$V(\text{Primary coil}) = \sin(t)$$

$$V(\text{Induced Secondary coil}) = -V'(\text{Primary coil}) = -(\sin(t))' = -\cos(t)$$

Notice that $\sin(t - \pi/2) = -\cos(t)$

Hypothetical Induction from Secondary coil to Primary coil:

$$V(\text{Induced Primary coil}) = -V'(\text{Induced Secondary coil}) = -(-\cos(t))' = -\sin(t)$$

Notice that $\sin(t - \pi) = -\sin(t)$

The description of the energy transferring process should be

$$E(\text{Original Primary coil}) \rightarrow E(\text{Induced Secondary coil})$$

$$E(\text{Induced Secondary coil}) \rightarrow E(\text{Induced Primary coil})$$

$$E(\text{Induced Primary coil}) = -E(\text{Original Primary coil})$$

$$E(\text{Final Primary coil}) = E(\text{Induced Primary coil}) + E(\text{Primary coil})$$

$$E(\text{Final Primary coil}) = E(\text{Primary coil}) + (-E(\text{Primary coil}))$$

$$E(\text{Final Primary coil}) = E(\text{Primary coil}) - E(\text{Primary coil})$$

$$E(\text{Final Primary coil}) = 0$$

Thus:

$$V(\text{Primary coil}) = V(\text{Primary coil}) + V(\text{Induced Primary coil})$$

$$V(\text{Primary coil}) = \sin(t) + (-\sin(t))$$

$$V(\text{Primary coil}) = \sin(t) - \sin(t)$$

$$V(\text{Primary coil}) = 0$$

$$V(\text{Induced Secondary coil}) = -\cos(t)$$

Now if we further place another coils into the system, and each system is connected to

an identical load. Thus we have two system both demanding electrical energy and providing a source of electrical energy at the same time. In accordance with Euler' s Coils technology, the iteration would work to reverse any attempted change of state of the system, thus force the system to a particular result which produce more electrical energy than input.

Setup:

This experiment is divide into two group in terms of A.C power supply: transitory (T) and persistent (P), the former will have only transitory and periodic A.C power supply while later have A.C power supplied uninterrupted.

The control (C) is an A.C source connected to a ' normal' Transformer with 1:1 Primary to Secondary ratio. The Secondary coils is connected to a load.

The comparison circuit 1-A is an A.C source connected to a modified Transformer which we have one Source coil in the right of two Response coils, and each of them connected to an identical load as in the Control.

Two comparison circuits 1-B-1/2 are an A.C source connected to a modified Transformer which we have one Source coil in the right of two Response coils, but only one of them is connected to a load identical to the one in Control.

Expected Result:

If Hypothesis A is right, then we would expect the voltage variation would only happen when its energy is supplied by an A.C source, therefore we should only observe periodic voltage variation in group T when A.C power is on. The period is controlled by the supply frequency f . We should expect the amplitude of voltage variation in the descending order of C,1-A,1-B-1 & 2 for both groups since there are more Response coils to share the electrical energy coming a single source of power.

If Hypothesis B is right, then we would expect little difference between group P and T since the later give spaces for the infinite recursive interaction to generate enough electrical energy to sustain the system. Particularly, the outputting voltage would increase as the number of Response coils increase. Thus the amplitude of outputting voltage variation would be in ascending order of C,1-A,1-B1/2 in both group.

Moreover, since T group is generating more electrical energy than P group, the effect should be stronger in T group than P group. We expect $T_C=TP, T_1>P_1, T_2>P_2$.

Result:

Discussion:

Setup P and T is use to verify the experimental hypothesis that the infinite recursive interaction do happen therefore we could replace persistent voltage supply with transitory voltage supply without affecting the function of the system(implying 'extra' energy induce in the process). The purpose of having more Response coil in 1 and 2 is to demonstrate convincingly that the electrical energy is coming from the Response coil but NOT from the Source coil, thus the total amount of electrical energy increase as the number of Response coil increase. That is the basic principle of Euler' s Coil

technology.