# MAGNETS

## IN•YOUR•FUTURE

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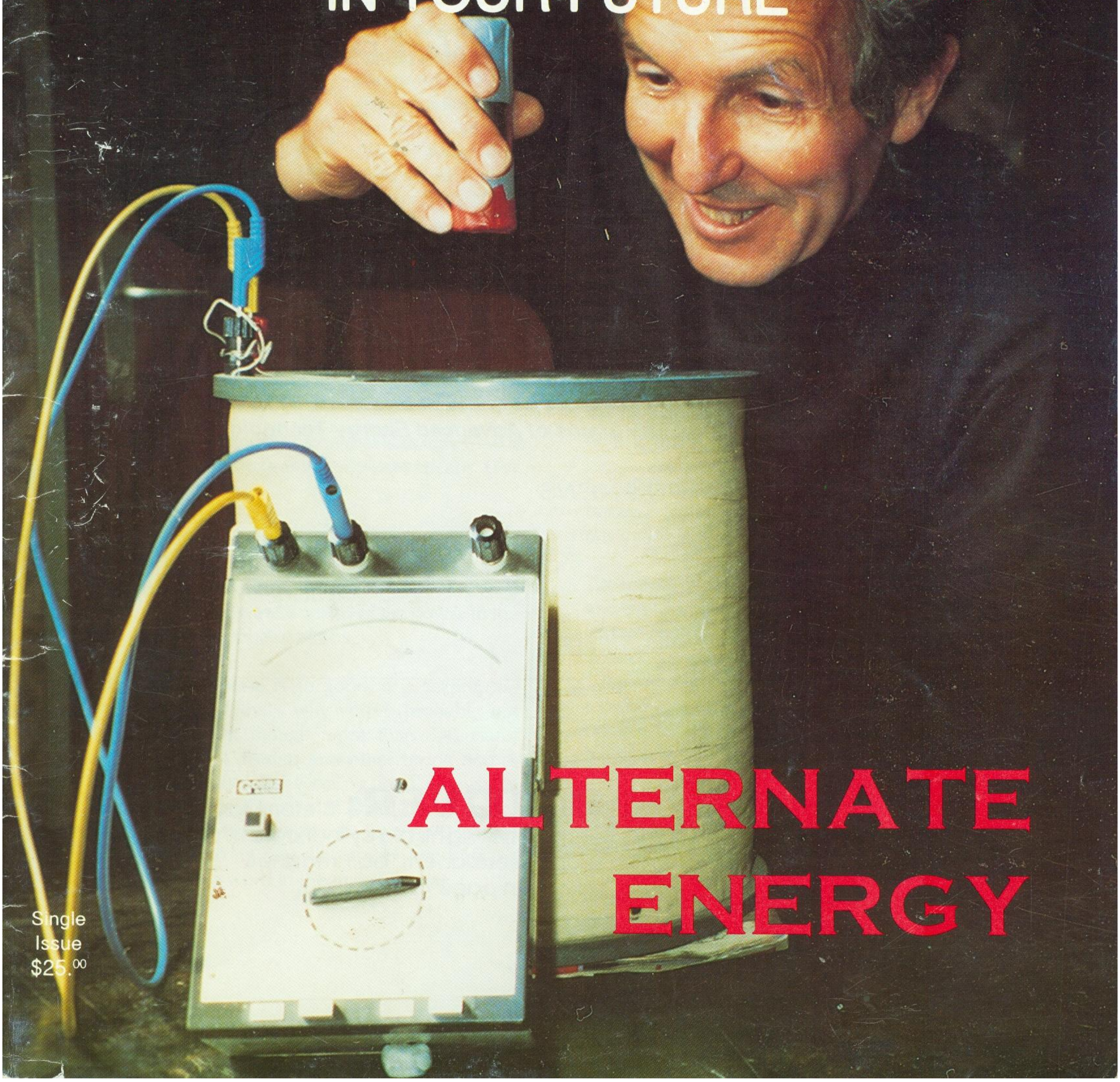

# ALTERNATE ENERGY

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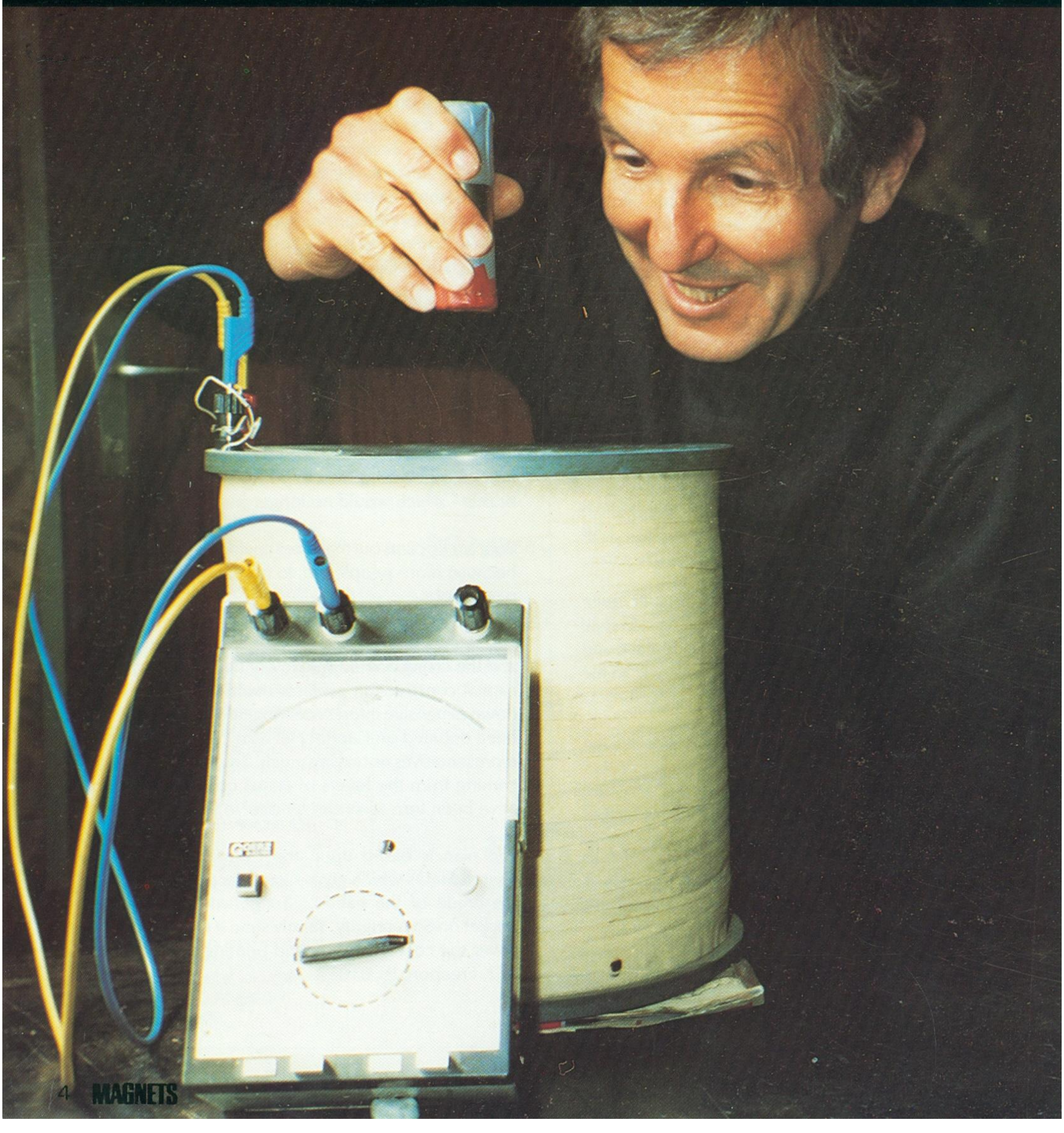
FIGURE 2 - STEFAN MARINOV DEMONSTRATING HIS BIG CYLINDRICAL COIL AND STRONG PERMANENT BAR MAGNET.



# THE GENERATOR VENETIN COLIU PRODUCES FREE ENERGY

*I show that every generator of electric current with permanent magnets demonstrates an anti-Lenz effect, i.e., for certain moments the magnetic action of the current induced in the coil is supporting the rotation and not braking it, although for the major part of the time it is opposing the rotation (normal Lenz effect). The reason for the appearance of the anti-Lenz effect is the retardation of the induced current with respect to the induced tension. I present several experiments where this retardation can be clearly observed. When the inductive resistance of the coil is much bigger than its ohmic resistance the Lenz and anti-Lenz effects become equal and the generator does not brake when producing electrical energy, so that the whole electric energy produced by it is free energy. I present one of the VENETIN COLIU machines (VENETIN COLIU - III) built by me which clearly shows that if the free power will be sufficient, one can feed with it the driving motor and thus realize a perpetual motion.*

## INTRODUCTION

In reference 1 , I presented the non-braking generator MAMIN COLIU (MArinov's Motional-transformer INductor COupled with a LIghtly rotating Unit) which is an electromagnetic generator with permanent magnets. Because of the special geometry of the machine, when induced current flows in the coil, no electromagnetic braking moment does appear, so that the driving d.c. motor consumes at open and closed coil exactly the same power. To make a perpetual motion machine on the basis of the MAMIN COLIU effect, one has to produce electric power (which can be extracted from the machine!) more than the input power, so that the energetic circle can be closed. I built six different models of the MAMIN COLIU machine, all of which are presented with their schemes and photographs in ref. 1, but because of my

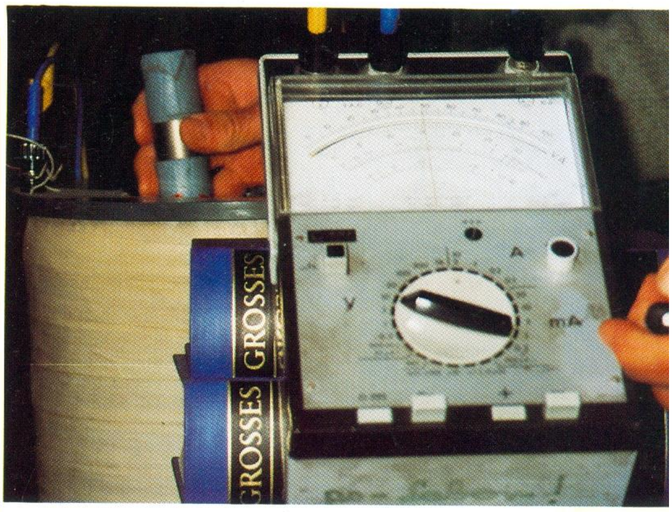
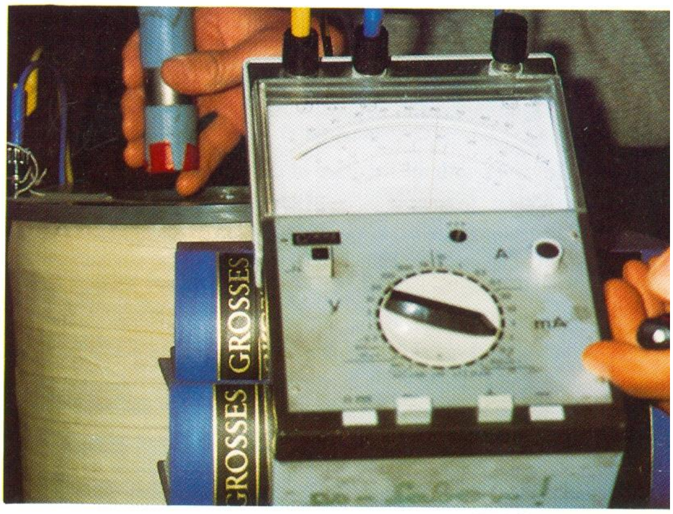



FIGURE 4 - MOMENTARY LENZ EFFECT WHEN PULLING THE PERMANENT MAGNET (AFTER HAVING PUSHED IT) AND THE MEASURING INSTRUMENT IS A VOLTMETER.

FIGURE 5 - MOMENTARY ANTI-LENZ EFFECT WHEN PULLING THE PERMANENT MAGNET (AFTER HAVING PUSHED IT) AND THE MEASURING INSTRUMENT IS AN AMPERE-METER.



limited financial possibilities, I was not able to produce enough free power and close the energetic circle.

Supported by the experimental and theoretical investigations of my friends Manuele Cavalli and Bruno Vianello from the town of Treviso, province of Veneto, Italy, after analyzing many different generators, I came to the conclusion that a similar non-braking effect can be observed in any generator with permanent magnets. However, in every "conventional" generator the non-braking effect appears only when ωL, i.e., the product of the circular frequency of the induced current, ω, and of the inductance of the coil, L, is substantially bigger than its ohmic resistance, R. A complete non-braking effect appears only when ωL is **much more bigger** than R (in MAMIN COLIU a complete non-braking effect appears at any relation of ωL to R).

I called this kind of non-braking generator VENETIN COLIU (in Italian: NICOLINO VENETO), as Cavalli and Vianello are of the province of Veneto and they first, after analyzing the non-braking effect in the MAMIN COLIU machine, pointed out that a similar non-braking effect appears also in any "conventional" generator.

The MAMIN COLIU generator does not brake because the magnetic interaction of the current induced in the coil with the permanent magnets generating the induced tension is zero. I called this the **zero-Lenz effect**.

At low rotational velocities the generator VENETIN COLIU manifests a braking effect and the measurements show that the **mechanical** braking power (which is calculated by the product of the braking mechanical torque M and the angular velocity Ω) of the acting **magnetic** braking (which is calculated by the Newton-Lorentz formula and gives the braking torque M) is quite equal to the electric power produced in the coil (which is calculated by the product of the square of the current, I, flowing in the coil, and its ohmic resistance, R).

However with the increase of the circular frequency, ω, when ωL gradually becomes bigger and bigger than R, the mechanical braking power MΩ gradually becomes less and less than $I^2R$, so that at $\omega L/R \rightarrow \infty$ we obtain $M\Omega/I^2R \rightarrow 0$.

When analyzing the VENETIN COLIU generator, i.e., when analyzing any conventional permanent magnet generator, we can see that at low rotational velocities the magnetic action of the current induced in the coil always opposes the rotation. This is called the **Lenz effect** (when clarity needs it, I always attach the adjective **"normal"**). However at higher rotational velocities, because of the retardation of the induced current with respect to the induced by the permanent magnets tension, for certain moments the magnetic action of the induced current **supports** the rotation. I called the last effect the **anti-Lenz effect**.

This article will be dedicated to the VENETIN COLIU generator and to the anti-Lenz effect.

## HOW THE CHILDREN DEMONSTRATE THE MOMENTARY ANTI-LENZ EFFECT

Let me formulate once more the Lenz rule (1834): When a permanent magnet moves with respect to a coil, such a tension, $U_{gen}$, is induced in the coil that if the coil will be closed **and the current flowing is proportional to the tension** $U_{gen}$, then the magnetic interaction between this current and the magnet will **brake** (oppose) the motion of the magnet.

Thus the motion of the magnet with respect to the coil determines the appearance of the induced **tension**, but the braking of the motion of the magnet is due to the action of the **current** induced in the coil. It seems that 160 years after Lenz, this substantial difference has not been grasped by humanity.

If the inductance of the coil is small and we can neglect it, the motion of the magnet will automatically determine also the induced current, I, as we shall have

*(1)*

$$I = U_{gen}/R,$$

where R is the ohmic resistance of the coil.

However, when the coil has a certain self-inductance, L, the current cannot follow exactly the generated tension, as now the current in the coil will be proportional to the sum, U, of the generated tension, $U_{gen}$, and of the self-induced tension, $U_{ind}$, so that (see ref. 2)

*(2)*

$$I = \frac{U}{R} = \frac{U_{gen} + U_{ind}}{R} = \frac{U_{gen} - L\,(dI/dt)}{R}.$$

Let us consider the most simple case of a solenoidal coil

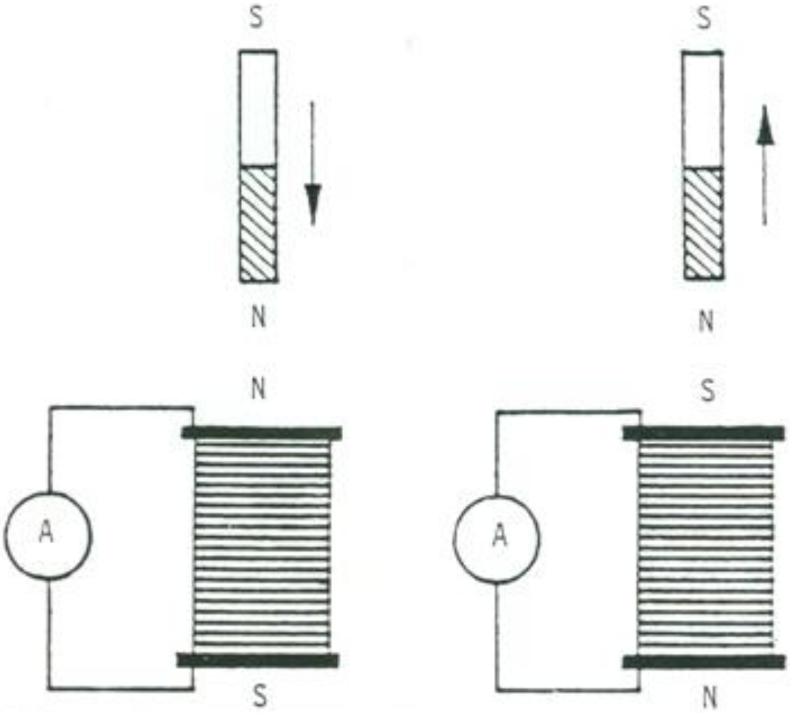



FIGURE 1 - WHICH POLARITY OBTAINS A CYLINDRICAL COIL WHEN A PERMANENT MAGNET IS PUSHED IN AND PULLED OUT.

and a permanent magnet which will be pushed in the coil and then pulled out (fig.1 and fig.2). *(For figure 2, see page 4 of article)* In figure 4a on p. 55 of ref. 2, there are presented the time graphs of the induced in the coil tension, $U_{gen}$, and of the current flowing in the coil, I, for the case where the inductance of the coil, L, is small and can be ignored. During the first half of the period, starting from the rest position outside the coil, the magnet is pushed in the coil until reaching the rest position in the coil. During the push-motion the current in the coil has such a direction that on the upper side of the coil there will be a north magnetic pole, which will repulse the north pole of the approaching permanent magnet and thus will oppose its motion. During the second half of the period, starting from the rest position in the coil, the magnet is pulled out of the coil until reaching the rest position outside the coil. During the pull-motion the current in the coil has such a direction (opposite to the previous one) that on the upper side of the coil there will be a south magnetic pole, which will attract the north pole of the receding permanent magnet and thus will again oppose its motion.

However when the coil has a considerable self-inductance, the time graphs of the generated tension and of the current flowing in the coil are presented on the cover of DEUTSCHE PHYSIK, as well as in fig. 4b on p.55 of ref. 2.

I have shown this graph in fig. 3 for a sinusoidal generated tension. A sinusoidal tension can be induced if the magnetic flux in the coil at the magnet's rest position outside of the coil (fig.1) is zero and when reaching this point we turn over the magnet momentarily, so that after having approached the coil with the north pole we approach it the next time with the south pole, and so on. I have drawn in fig. 3 also the graph of the self-induced tension, $U_{ind}$, and of the net tension

*(3)*

$$U = U_{gen} + U_{ind},$$

taking the ohmic resistance of the coil as unity, so that the graphs of the current and of the net induced tension coincide.

The graphs are plotted proceeding from the mathematics presented on pp. 42 and 43 of ref. 2, i.e., proceeding from the equation giving the relation between tensions and current (see eq. (9) on p. 43 of ref. 2, exchanging sin for - cos and cos for sin)

*(4)*

$$U_{gen\text{-}max} \sin(\omega t) - \omega L I_{max} \cos(\omega t - \phi) = R I_{max} \sin(\omega t - \phi),$$

where $U_{gen\text{-}max}$ is the amplitude of the generated tension, $I_{max}$ is the amplitude of the current, $\omega$ is the angular frequency, $\phi$ is the angular delay with which the maximum of the current appears after the appearance of the maximum of the generated tension, R is the ohmic resistance of the coil, and L is its inductance.

I have chosen $R = 1\ \Omega$, $\omega L = \sqrt{3}\ \Omega$, so that the impedence of the coil will be $Z = (R^2 + \omega^2 L^2)^{1/2} = 2\ \Omega$, and we shall have

*(5)*

$$I_{max} = U_{gen\text{-}max}/Z = 1/2\, U_{gen\text{-}max} = 0.5\, U_{gen\text{-}max},$$

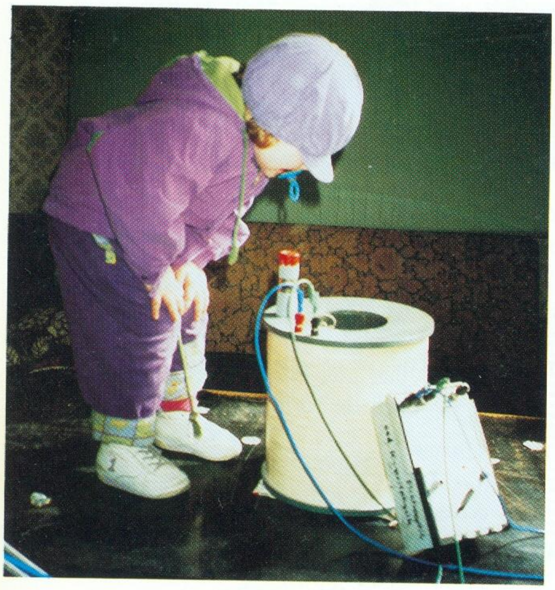
$$U_{ind\text{-}max} = \omega L I_{max} = \frac{\sqrt{3}}{2} U_{gen\text{-}max} = 0.87 U_{gen\text{-}max},$$

and equation *(4)* can be rewritten in the form

*(6)*

$$U_{gen\text{-}max} \sin(\omega t) - 0.87 U_{gen\text{-}max} \cos(\omega t - \phi) = 0.5 U_{gen\text{-}max} \sin(\omega t - \phi).$$

FIGURE 6 - AFTER HAVING UNDERSTOOD THE ESSENCE OF THE ANTI-LENZ EFFECT........, LITTLE TADEA DEMONSTRATES IT TO HER MOTHER AND TO THE WORLD'S SCIENTIFIC COMMUNITY.



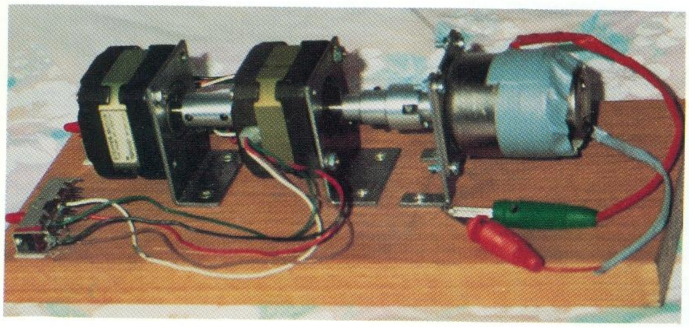


FIGURE 7 - TWO MECHANICALLY COUPLED STEPPING MOTORS (USED AS GENERATORS) DRIVEN BY A COMMON D.C. MOTOR. THE SELF-ACCELERATING STEPPING MOTORS ARE VENETIN COLIU-V.

FIGURE 8 - A STEPPING MOTOR OPEN.

The phase angle has the value

*(7)*
$\phi = \arctan(\omega L/R) = \arctan\sqrt{3} = 1.05 \text{ rad} = 60^\circ$.

The positive current in figure 3 (i.e., the current above the x-axis) produces a north pole at the upper end of the coil in figure 1 and the negative current produces a south pole.

The motion of the magnet is as follows:

a) during the time $t_1$-$t_2$ a push motion with the north pole pointing to the magnet,

b) during the time $t_2$-$t_3$ a pull motion with the north pole pointing to the magnet,

c) during the time $t_3$-$t_4$ a push motion with the south pole pointing to the magnet,

d) during the time $t_0$-$t_1$ a pull motion with the south pole pointing to the magnet.

I should like to define once more with more precision:

If at a given moment the magnetic action of the current flowing in the coil opposes the motion of the permanent magnet, I call this **momentary Lenz effect**; if however it supports the motion of the permanent magnet, I call this **momentary anti-Lenz effect** (if precisation is necessary the Lenz effect will be called also **normal** Lenz effect). The effect of opposing (supporting) the motion of the permanent magnet for the whole period of motion is called **integral Lenz effect (integral anti-Lenz effect)**. If for the whole period the motion of the magnet is neither opposed nor supported, I call this **integral zero Lenz effect**. The **momentary zero Lenz effect** appears when the current in the coil is zero.

One can very easily demonstrate a momentary anti-Lenz effect, i.e., one can demonstrate that at certain moments the current induced in the coil supports the motion of the magnet and does not brake it, as Lenz generalized in 1834.

I made such demonstrations (see figures 4 and 5 *photos on page 5 of article)* with my big coil which has 140,000 turns of wire with thickness 0.3 mm, ohmic resistance $R = 20{,}000\ \Omega$ and inductance $L = 3{,}700$ H. My permanent magnet was of neodymium (VACODYM 335) produced by the plant Vacuumschmelze in Hanau, Germany, with energy product $(BH)_{max} = 270$ kJ/m³. This was a cylindrical magnet with diameter 3 cm and length 10 cm.

First I registered the generated tension by a d.c. voltmeter when pushing and pulling the permanent magnet. The pointer of the voltmeter always "followed" the motion of my hand.

Then I registered the flowing current by an ampere-meter when pushing and pulling the permanent magnet. I could easily see that the pointer of the same apparatus "followed" **with a delay** the motion of my hand.

In figures 4 and 5 *(photos on page 5 of article)* there are two photographs which can persuade the reader in the authenticity of my observations: I chose such ranges of the voltmeter and ampere-meter that the deviations of the pointer were quite the same when pushing and pulling the magnet exactly in the same manner. This signified that always the same current has passed through the coil of the measuring instrument and the delays in the motion of the pointer due to mechanical and electrical causes **of the measuring instrument** were **exactly the same**. However, when using the measuring instrument as a voltmeter, a big resistance was inserted in series with the coil of the measuring instrument, while when using it as ampere-meter, a small resistance was inserted in parallel to the coil of the measuring instrument.

I took the photographs always when pulling out the magnet from the coil (after having pushed it). As figure 4 shows, when my big induction coil was closed by a big

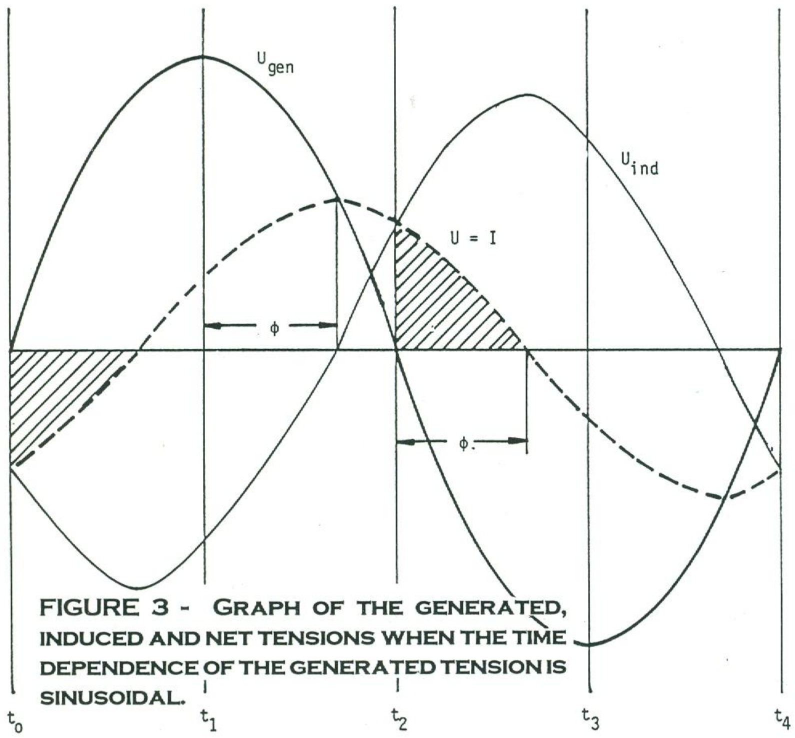



FIGURE 3 - GRAPH OF THE GENERATED, INDUCED AND NET TENSIONS WHEN THE TIME DEPENDENCE OF THE GENERATED TENSION IS SINUSOIDAL.

resistance, the flowing current at the pull motion had such a direction (note that the bottom "+" was pressed) that the current opposed the motion. However, as figure 5 shows, when my big induction coil was closed by a small resistance, the flowing current at the moment of taking the picture during the pull motion had such a direction (note that the bottom "-" was pressed) that the current **supported** the motion.

Little Tadea has very quickly understood the essence of the anti-Lenz effect and, as figure 6 shows, she also tried immediately to demonstrate this simple effect to the scientific community. However, I doubt whether the scientific community will pay attention to her demonstration.

## HOW THE ANTI-LENZ EFFECT CAN BE DEMONSTRATED ON AN OSCILLOGRAPH

With the aim to observe the time delay of the current flowing in the coil of a generator with respect to the generated tension, I fixed the rotors of two stepping motors to a common axle and drove them by a d.c. motor (see figure 7).

But first I should like to make clear to the reader what a stepping motor is, considering one of the motors from figure 7 which were of the type KP4M4, produced in India for IBM computers.

In figure 8 one of these motors is presented open. The rotor consists of two fixed one to another parallel cogged disks with 25 strongly magnetized cogs each, so that the cogs of the one disk have north magnetism and the cogs of the other disk south magnetism. The angular distance between two neighboring cogs is $\alpha = 360:25 = 14^0.4$. The cogs of the two disks are displaced at an angle $\alpha/2 = 7^0.2$, so that when looking at the generatrix of the cylindrical surfaces of the disks one sees the cogs of the one disk in front of the notches of the other.

The stator has four cores, any of which has four cogs, so that in the space between two neighboring cores there are "missing" $n_o = (25 - 16):4 = 2.25$ cogs. Around the cores four double coils are wound in such a way that every one of these double coils is connected in series with one of the double coils wound around the opposite core.

Thus there are eight issues. Four of these eight issues are connected to a common point (a black issue) and the other four (colored) issues are the free ends of the four coils (any of which, I repeat, is wound about two opposite cores). Every such coil has ohmic resistance R = 80 Ω and inductance L = 0.04 H.

I present in figure 9 a very simplified diagram of the stepping motor, from which one can easily grasp the principle of tension generation when rotating the rotor.

I have reduced in figure 9 the cogs of the rotor to 13 and the cogs on every core to two. Then I have drawn only two opposite cores, omitting the two other cores.

At the situation shown in the figure the anterior (north)

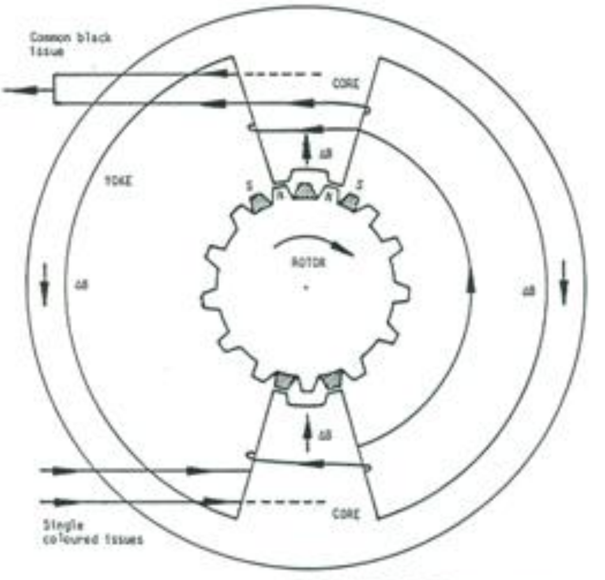



FIGURE 9 - DRAWING OF A STEPPING MOTOR.

upper cogs of the rotor come in front of the cogs of the upper core, while the posterior (south) lower cogs of the rotor come in front of the cogs of the lower core. Thus the magnetic intensity in the upper core increases in direction up (and reaches its maximum when the north upper rotor's cogs will be exactly in front of the upper stator's cogs), while the magnetic intensity in the lower core increases also in direction up (and reaches its maximum when the south lower rotor's cogs will be exactly in front of the lower stator's cogs).

The tension induced in the windings of the upper and lower coils will be such that the magnetic intensity, generated by the current flowing in the windings, must point down, as it must oppose the change of the magnetic intensity in the core (I apply the Lenz rule at the condition $\phi = 0$!). Thus the direction of the induced current will be as shown in the figure. There are two parallel such coils. In figure 9 their initial points are connected but in my motor (figure 8) the final point of the one parallel coil was connected with the initial point of the other one.

Thus when at ($\phi = 0$) the upper north rotor's cogs approach the stator's cogs, the current in the upper half of the coil has the indicated in figure 9 direction, becoming zero when the north rotor's cogs are exactly in front of the stator's cogs. When the north rotor's cogs go away from the stator's cogs, i.e., when the upper south rotor's cogs approach the upper stator's cogs, the current in the upper half of the coil has the opposite direction, becoming zero when the south rotor's cogs are exactly in front of the stator's cogs. Consequently, at a rotation on "one cog" the induced tension (and induced current) complete one cycle. The time, T, for this cycle is called period. The quantity $\nu = 1/T$ is called linear frequency and the quantity

*(8)*

$$\omega = 2\pi\nu = 2\pi/T$$

is called circular frequency. As the rotor has n = 25 cogs, at a rotation with N rev/sec, the circular frequency will be

*(9)*

$$\omega = 2\pi nN = 50\pi N.$$

The inductive resistance of the coil will be

*(10)*

$$X = \omega L = 50\pi NL.$$

The phase angle is (see formula (12) on p. 43 of ref. 2)

*(11)*

$$\phi = \arctan(\omega L/R) = \arctan(50\pi NL/R) = \arctan(0.08N).$$

Thus at N = 12.5 rev/sec we have $\phi = 45^0$.

In figure 10 one sees the oscillogram of the tensions generated by two coils of the two stepping motors shown in figure 7 whose rotors are rotated on a common axle by a d.c. motor. The tensions are conducted to the two channels of a double-beam oscilloscope.

The oscillogram shows that the minimum of the tension generated by the coil of the second stepping motor (second channel) comes with 74⁰.5 before the minimum of the tension generated by the coil of the first stepping motor (first channel).

Then I closed the second coil by a resistance of 10 Ω and led the electric tension acting on this resistance to the channel 2 of the oscilloscope. The tension from the resistance was taken in such a way that on the oscilloscope it was inverted with 180⁰ with respect to the induced tension (this inversion could be evaded if I had earthed not the "left" end of this resistance but its "right" end!). Now we see that the maximum of the current (as a matter of fact, the **minimum of the current** if the 180⁰ - inversion was evaded!) appears with 180⁰ - 164.9⁰ = 15.1° before the minimum of the tension generated by the coil of the first stepping motor (see figure 11).

Thus the retardation of the current in the second coil with respect to the tension generated in it, i.e., the phase angle, was

*(12)*

$\phi = 74°.5 - 15°.1 = 59°.4$.

According to formula *(11)* this phase angle corresponds to the following rate of rotation

*(13)*

N = 12.5 tan 59°.4 = 21 rev/sec.

The measurements gave indeed this number for the rotational rate.

Figure 3 which is drawn for $\phi = 60°$, shows the relation between generated tension, induced tension and flowing current (i.e., net tension) which were established in the coil of my stepping motor at a rotation with 21 rev/sec.

I should like to repeat once more that the most which can be reached with the generator VENETIN COLIU is an **integral** zero-Lenz effect as always **for the whole period**

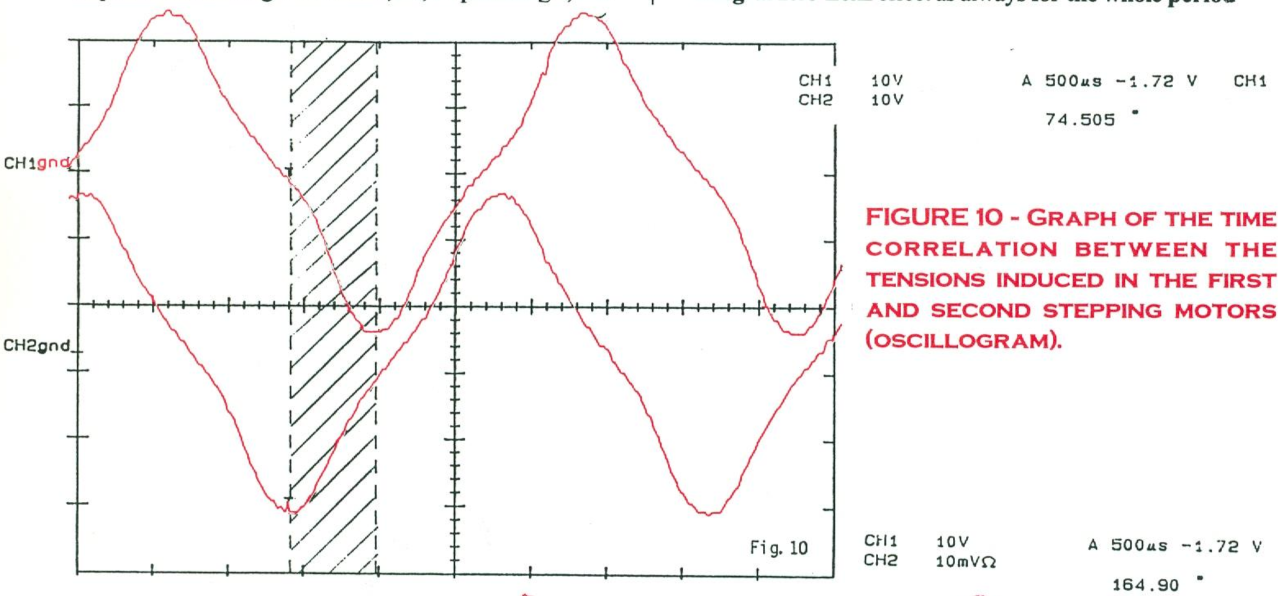



FIGURE 10 - GRAPH OF THE TIME CORRELATION BETWEEN THE TENSIONS INDUCED IN THE FIRST AND SECOND STEPPING MOTORS (OSCILLOGRAM).

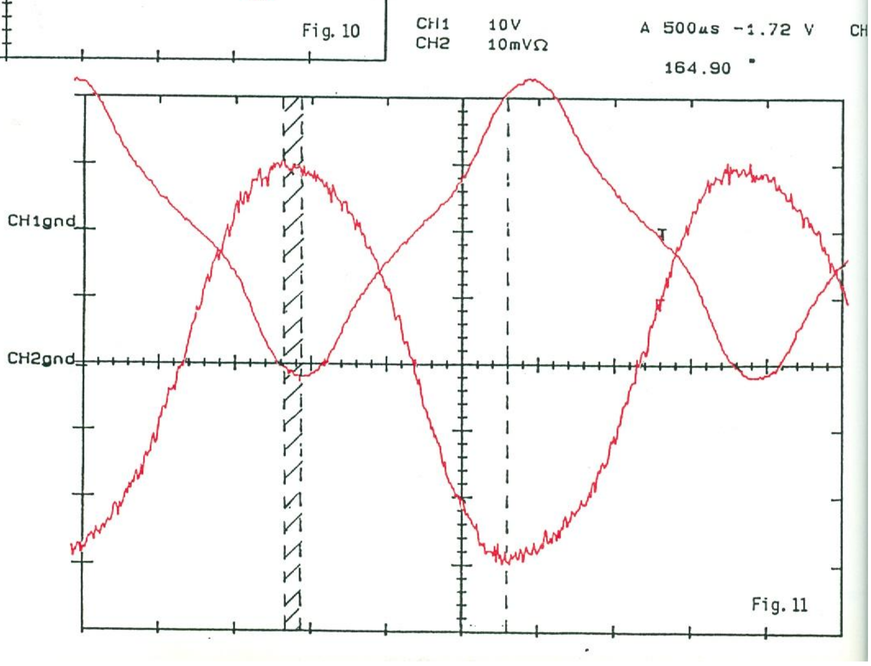



FIGURE 11 - GRAPH OF THE TIME CORRELATION BETWEEN THE TENSION INDUCED IN THE FIRST STEPPING MOTOR AND THE CURRENT INDUCED IN THE SECOND ONE (OSCILLOGRAM).

**of motion** the Lenz effect is bigger than the anti-Lenz effect.

If there is soft iron in the coil, the phenomena become more complicated. If the soft iron is without eddy currents (for example, soft ferrite) and without hysteresis losses (i.e., with a very narrow hysteresis loop), the effects analyzed until now remain exactly the same.

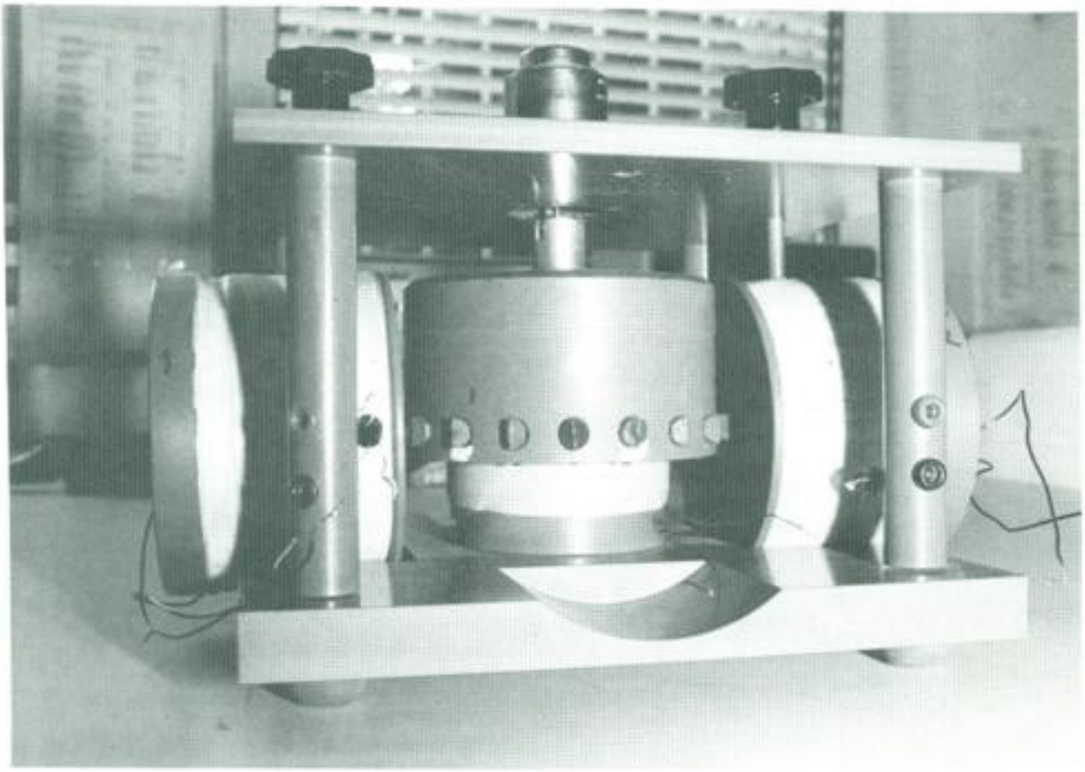
In sect. 4 of ref. 2, I introduced the hypothesis that if the soft iron has a wide hysteresis loop, one **may** come to an integral anti-Lenz effect. The experimental stimulation for this hypothesis were the effects of self-acceleration which Cavalli, Vianello and I observed in different generators[2,3]. But as I pointed out in sect.3 of ref. 2, there is also another reason which provokes such a "self-acceleration": the decrease of the eddy currents. One can easily see from fig. 3 that the magnetic flux produced by the coil for $\phi \rightarrow 90^\circ$ is **exactly opposite** to the magnetic flux produced by the permanent magnet ( the latter has a positive maximum for $t_0$ and negative maximum for $t_2$). As the eddy currents depend on the changes of the **net** magnetic flux, they must decrease. We observe this as a "self-acceleration" of the generator when the coil is short-circuited. As I have not the experimental possibilities to separate the "self-acceleration" effect due to the decrease of the eddy currents from the self-acceleration effect **mentally introduced** in sect.4 of ref. 4, the possibility for an **integral** Lenz effect remains only a hypothesis.

THE MACHINE "VENETIN COLIU - III"

I constructed five variations of the machine VENETIN COLIU marked by the numbers I[2], II[2], III[2], IV[4] and V[5].

According to me, VENETIN COLIU - III is the machine with the greatest prospect of success. Now I am working on a new variation of VENETIN COLIU - III where, I hope, the produced free power will be sufficient for feeding the driving d.c. motor.

In sect.7 of ref. 2 there are presented the observations which I did with VENETIN COLIU - III in 1991. Here I shall present another series of measurements with the



same machine which I carried out recently. I must note that at the new measurements I put the coils at bigger distances from the rotating permanent magnets than in 1991 with the aim to rotate the machine more calmly and diminish the fluctuations of the ampere-meter to the possible minimum. This change, however, has led to more feeble induced currents.

But first I shall explain how the machine VENETIN COLIU - III is done (fig. 12).

A d.c. motor (seen on the top of fig. 12) rotates a plastic "cup" with its bottom up. On the rim of this "cup" 16 cylindrical permanent neodymium magnets (with height 10 mm and diameter 10 mm) are arranged (in fig. 12 one can see 8 of these magnets). To diminish the pernicious eddy currents, "caps" of soft ferrites are stuck on both bases of these cylindrical magnets. With the aim to make the line of decrease of the induced positive tension and the line of increase of the induced negative tension more steep, the ferrite "caps" are slanted on both sides ending thus with a vertical edge.

Outside of the rotating "cup" there are two fixed coils, numbered 1 and 2, with scanted soft cylindrical ferrites for cores, and inside there is another fixed coil, numbered 3, with cylindrical ferrite for core. Two other coils can also be put outside. The current produced by the coils is alternating.

I measured the power consumed by the d.c. motor feeding it with tensions $U_m$ = 5, 10,15 and 20 V, for the cases of open and closed coils, according to the formulas

*(14)*

$$P_m = U_m I_m, \qquad P'_m = U_m I'_m$$

where $I_m$ is the current consumed by the motor when the coils are open and $I'_m$ when they are closed.

Then I measured the power produced by the coils as Joule's heat, according to the formula

*(15)*

$$P_g = P_1 + P_2 + P_3 = R_1 I_1^2 + R_1 I_2^2 = R_3 I_3^2$$

where $R_1$, $R_2$, $R_3$ are the ohmic resistances of the coils and $I_1$, $I_2$, $I_3$, are the alternating currents induced in the coils.

All measurements are arranged in table 1.

TABLE 1 (Resistances of the coils: $R_1 = 1\ \Omega$, $R_2 = 10\ \Omega$, $R_3 = 20\ \Omega$)

| Tension on the motor $U_m$ (V) | Current consumed by the motor: open coils $I_m$ (mA) | Current consumed by the motor: closed coils $I'_m$ (mA) | Power consumed by the motor: open coils $P_m$ (mW) | Power consumed by the motor: closed coils $P'_m$ (mW) | Increase of the power $\Delta P_m$ (mW) | $\frac{\Delta P_m}{P_m}$ % | Induced current $I_1$ (mA) / $I_2$ (mA) / $I_3$ (mA) | Induced power $P_1$ (mW) / $P_2$ (mW) / $P_3$ (mW) | Integral induced power $P_g$ (mW) | $\frac{P_g}{P'_m}$ % |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 29 | 35 | 145 | 175 | 30 | 21 | 231<br>39<br>32 | 53<br>15<br>20 | 88 | 50 |
| 10 | 58 | 60 | 580 | 600 | 20 | 3 | 239<br>39<br>32 | 57<br>15<br>20 | 92 | 15 |
| 15 | 78 | 79 | 1170 | 1185 | 15 | 1 | 240<br>39<br>33 | 58<br>15<br>22 | 95 | 8 |
| 20 | 148 | 148 | 2960 | 2960 | 0 | 0 | 240<br>39<br>33 | 58<br>15<br>22 | 95 | 3 |

It is not necessary to make comments on theses measurements: the zero-Lenz effect at tension on the motor $U_m = 20V$ **is obvious**. Of course, one has to take into account the measurements presented in sect.7 of ref. 2 which show that the braking action of the eddy currents and the hysteresis losses, as extremely small, can be neglected.

As said above, I am now working on a new variation of the VENETIN COLIU - III machine, where only hard and soft ferrites will be used. If this machine still will not be a perpetuum mobile, then, at least, I am sure that the power produced $P_g$, will be bigger than the power consumed, $P_m$. The preliminary measurements give me this certainty.

REFERENCES


1. S. Marinov, The Thorny Way of Truth, Part III (East-West, Graz, 1988), p. 84.
2. S. Marinov, Deutsche Physik, **1**(1), 40 (1992).
3. S. Marinov, The Thorny Way of Truth, Part IX (East-West, Graz, 1991) p. 8.
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To the Editor:

Tom Valentine's LETTER FROM THE EDITOR in the July 1992 MAGNETS was most encouraging. He said "Where there is permanent magnetism, you most certainly have energy." An electron spinning in an atom is the smallest permanent magnet we know of as they always spin and radiate magnetic energy. Though one of the tiniest objects, there are probably more of these permanent magnets in the cosmos than any other particles or objects.

ZPE (Zero Point Energy) is humongous, one of the larger energy constants of nature. Are we making a big mistake by attempting to tap this energy directly from a vacuum? Any one atom or a large group of atoms has less than a trillionth of their volume filled with solid matter which is pretty close to a vacuum or empty space.

All electrons in all atoms always spin on their axis at a Bohr magneton and radiate magnetic energy. What makes atomic electrons all spin at this same constant rate or with perpetual motion? The atom, a vacuum or ZPE? Who cares? The McGraw-Hill Encyclopedia of Science and Technology under "Electron spin" says the peripheral velocity of these electrons far exceeds c (the speed of light or 186,000 mps) to radiate a magneton. Most free electrons do not spin.

Can iron tap ZPE by radiating magnetic energy at c? Iron has 4 unpaired electrons in the 3d sub-shell of the M shell which are easily aligned to spin in the same direction. Each of these 4 electrons are at the apex of a tetrahedron. (See quarterion math) A Bohr magneton radiates only 0.58 millionths of an electron volt/tesla but there are a huge number of unpaired electrons in a cubic centimeter of iron.

Is Einstein's THEORY responsible for our energy and pollution crises? Patent 4,567,407 is based on the law for the conservation of energy and was described in the January 1986 MAGNETS. It simply harnesses, instead of forever wasting, the constantly radiated magnetic energy from perpetually spinning electrons to make ac electricity without splitting or fusing atoms. Finally real atomic energy.

The motor portion of this patent can be made 95% efficient as well as the generator portion. This gives an overall efficiency of 90% for both the motor and the generator. If we now capture 40% of the motor power by built in transformer coupling we get an overall efficiency of 130%. It is no wonder in the past we could never get perpetual motion from gravity. Two electrons repel 10 to the 42nd power electrostatically more than they attract gravitationally. Magnetic energy or forces are of similar strength to electrostatic forces when compared to gravity. Spinning electrons have another great advantage in that they make an electron repel or attract another electron.

Sincerely,


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