The Voltage Intensifier Circuit

(Under Construction)

Stanley Meyer Developed the Voltage Intensifier Circuit (VIC) this in my opinion is a enhanced version behind the Gas Voltage control circuit.

The voltage interferer circuit is more efficient but needs a higher level of understanding to successfully replicate. Remember also that as I have said before patents are definitely not a blue print and specific key areas are left unexplained to some degree.

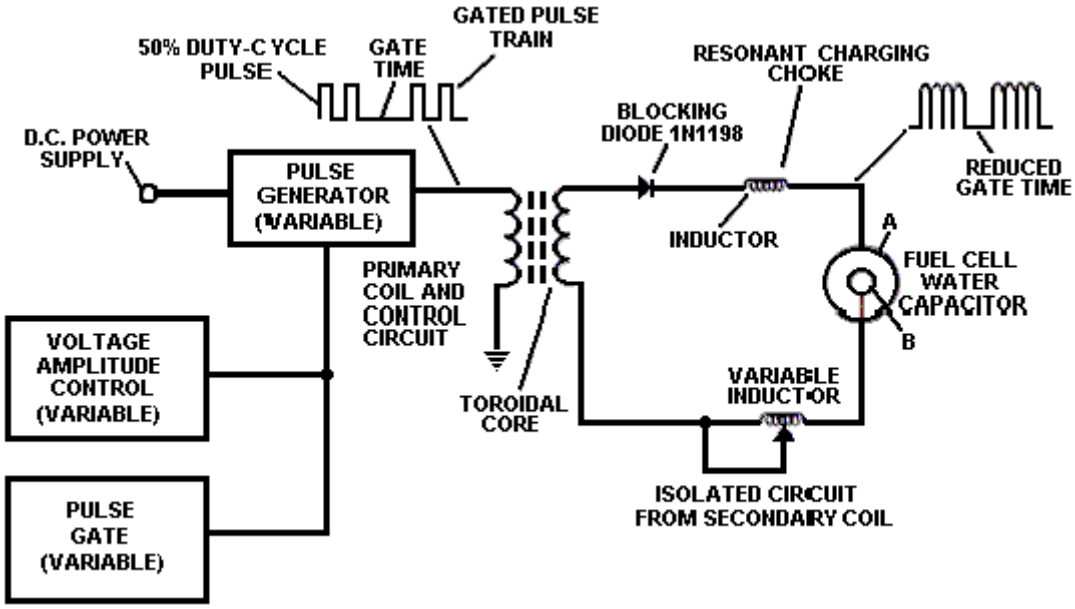
I will try to section certain areas of the VIC and explain the operation in as much detail as I can. I will also try to shed new light and theories on certain areas and how they might function.

I will also include my opinion on the parameters needed and give reference information where possible.

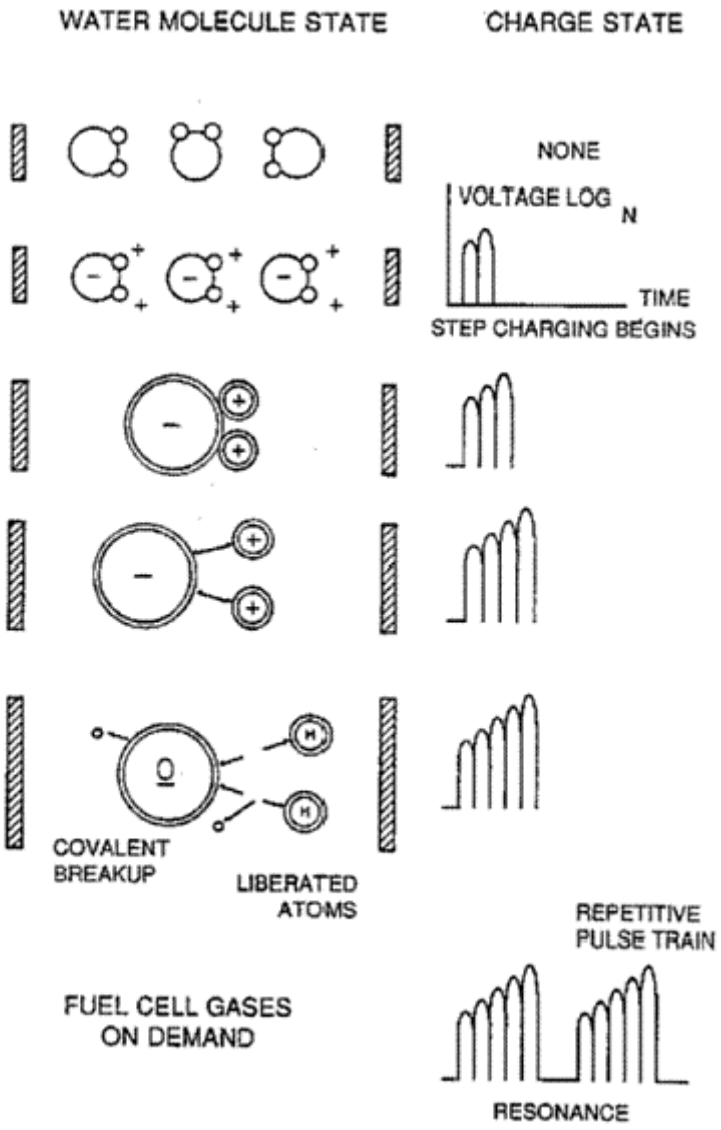
Please download the Patent 4,936,961- "Method of the production of a fuel gas" ....here (forum) and read through it then assess the information I will provide below.

The Voltage Intensifier circuit

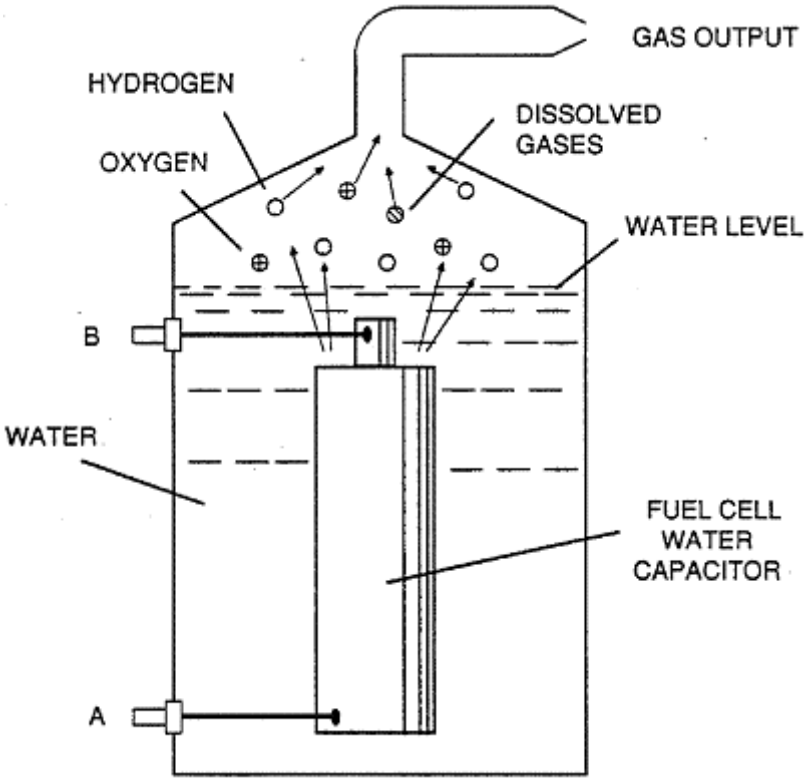
(Diagrams from Patent)



The Molecule Voltage Breakdown



The Water Capacitor



The Hydrogen Fracturing Process (Technical Brief) Book Information

Some of the information and diagrams from now on below have been sourced from the Technical Brief. The Information and diagrams have been gathered from different sections, these are.....

section 1 (WFC Hydrogen Fracturing process)

section 3 (Hydrogen Gas Management System)

section 7 (VIC Matrix Circuit)

I think they both offer information relating directly to the function of the Voltage Intensifier Circuit for Enhanced Gas Generation even though section 7 is specifically for the instant explosion of water mist through an injector.

The reference information can be downloaded here (forum)

The Hydrogen Fracturing Process (Technical Brief) Book - 7-20

Figure 7-8 : VIC Matrix Circuit

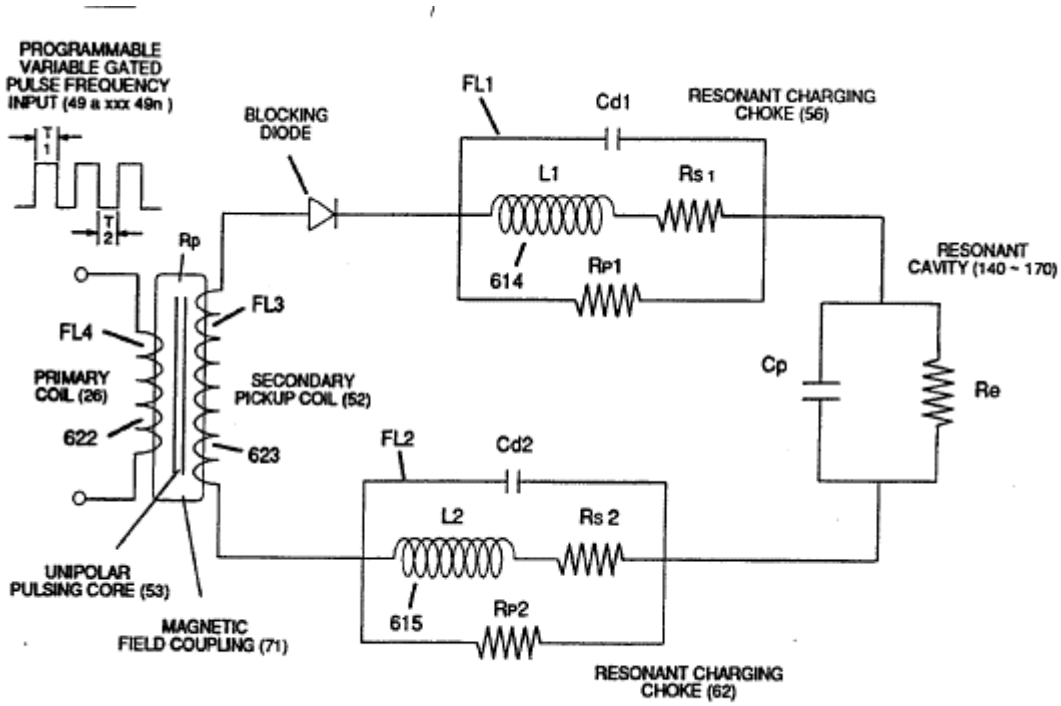


FIGURE 7-8: VIC MATRIX CIRCUIT

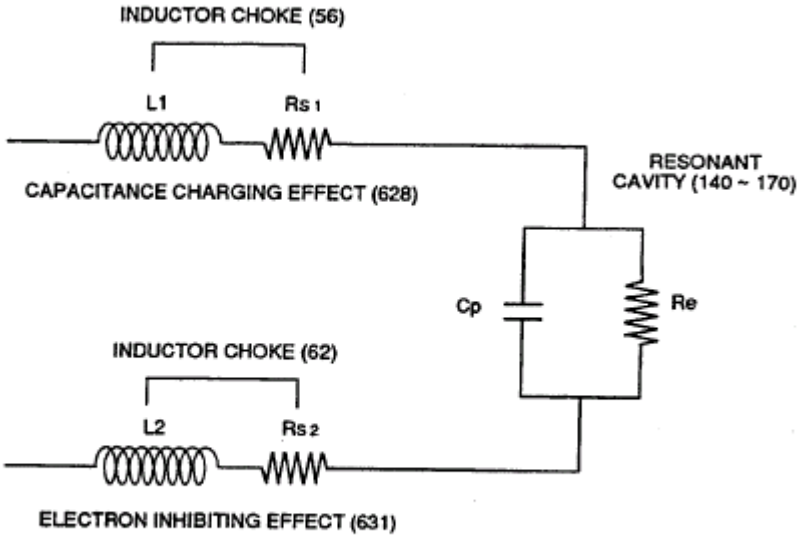
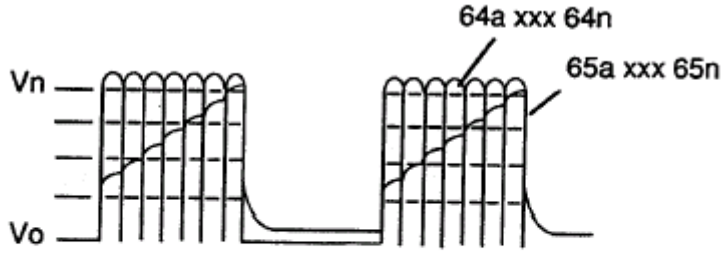


FIGURE 7-6: RESONANT VOLTAGE EFFECT

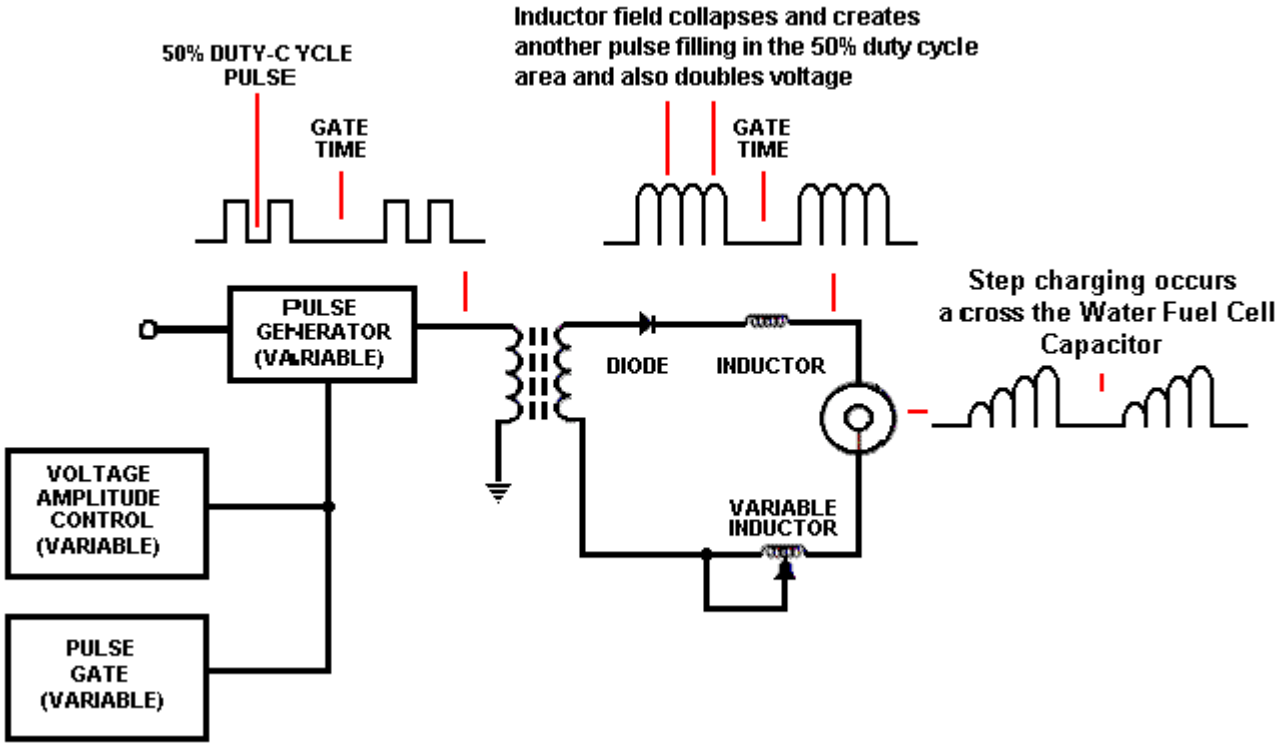


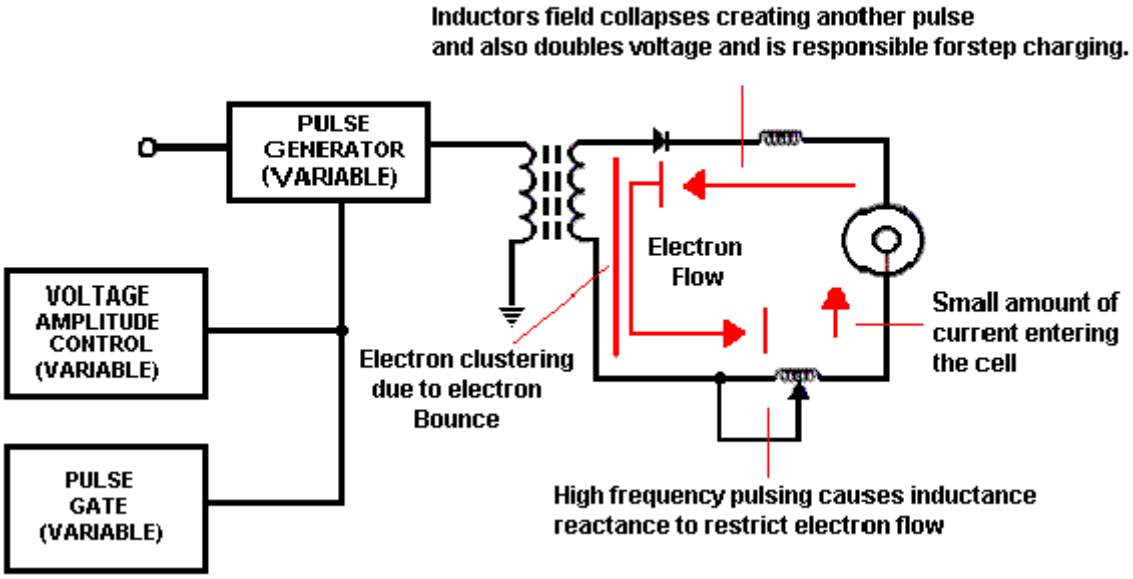
ELECTRICAL STEP CHARGING EFFECT

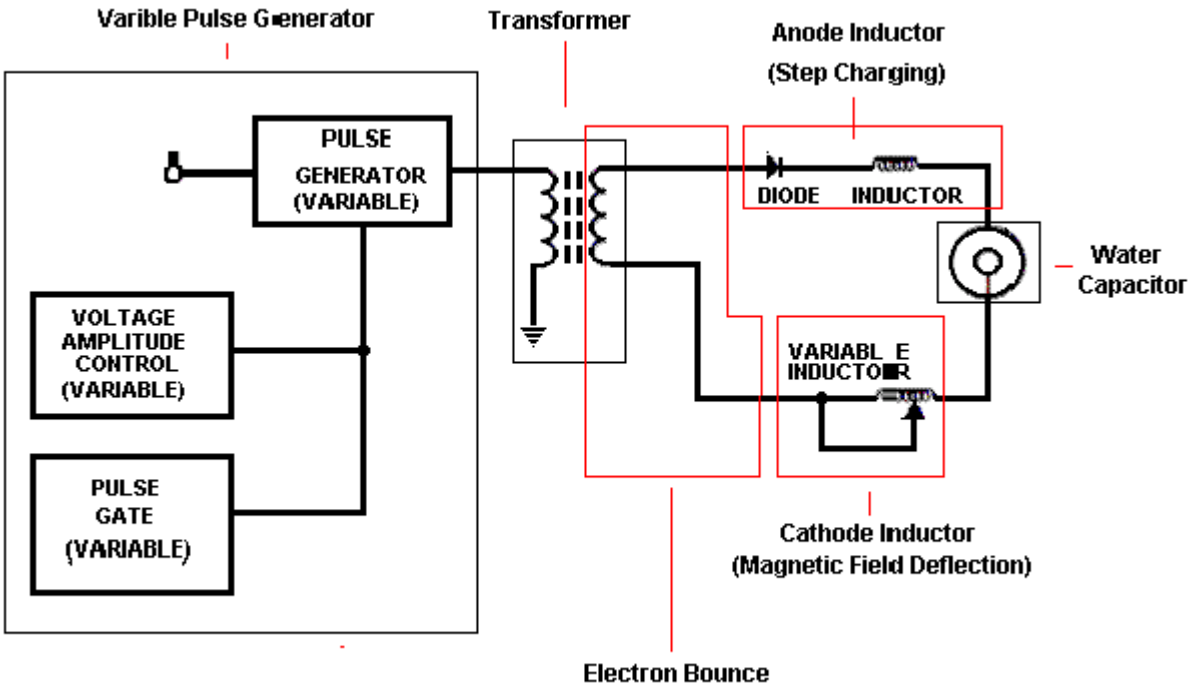
FIGURE 3-21: RESONANT CHARGING PULSE TRAIN

My Revised Drawings Of The VIC

(Brief Summary still under construction)






Varible Pulse Generator
Transformer
Anode Inductor
(Step Charging)
PULSE
GENERATOR
(VARIABLE)
DIODE
INDUCTOR
Water
Capacitor
VOLTAGE
AMPLITUDE
CONTROL
(VARIABLE)
VARIABL E
INDUCTOR
PULSE
GATE
(VARIABLE)
Cathode Inductor
(Magnetic Field Deflection)
Electron Bounce

Voltage Intensifier Circuit Sectioned Analysis

(under construction)

Frequency and Duty cycle

Quote form patent

"Resonance in the circuit was achieved at a 26 volt applied pulse to the primary coil of the torroid at 0KH.sub.z"

This is actually a typo in the patent I think? it should read **.....**the toroid at 10khz,sub.z

Quote from the Hydrogen Fracturing Process - Technical Brief reference page 3-16

"The established resonant frequency is most generally in the audio range from 1khz up to and beyond 10khz and is dependent upon the amount of contaminate in natural water."

Quote from the Hydrogen Fracturing Process - Technical Brief reference page 3-6

Variable Pulse Frequency Generator (70)

Circuit (70) of Figure (3-5) is a multi pulse-frequency generator which produces several clock pulses (simultaneously) having different pulse-frequency but maintaining a 50% duty cycle pulse (39) configuration, as illustrated in Figure (3-16). Pulse on-time (37) and pulse off-time (38) are equally displaced to form duty pulse (39) which is duplicated in succession to produce pulse train (41) of Figure (3-16). Increasing the number of duty pulses (39axxx 39n) up to pulse frequency range of 10Khz or above now forms clock signal (21) of Figure (3-5) which, in turns, performs the scanning function of Acceleration Control Circuit (30) of Figure (3-5). Circuit (70) also produces another independent and separate clock signal (41a xxx 41n) which is electrically transmitted to and become incoming clock signal (42) for Gated Pulse Frequency Generator Circuit (80) of Figure (3-5). In both cases, pulse frequency range of each clock signal (21) and (42) can be altered or change (controlled independent of each other) to obtain peak: performance of Fuel Cell System (100) of Figure (3-5).

Gated Pulse Frequency generator (80)

Gated Pulse Circuit (80) of Figure (3-5) switches "off' and "on" sections of incoming clock signal (42) to form gated pulse (45) which is, in turn, duplicated in succession to produce gated pulse train (46a xxx 46n) of Figure (3-17). Together pulse train (44a xxx 44n) and pulse offtime (43) forms gated pulse duty cycle (45). Pulse train (44a xxx 44n) is exactly the same as pulse train (41a xxx 41n) and its established pulse frequency (number of pulse cycles per unit of time) changes uniformly when pulse generator (70) of Figure (3-5) is calibrated and adjusted for system operations.

Newly formed gated duty pulse (45) is proportional to the physical change in pulse train (44a xxx 44n) when circuit (80) is adjusted for calibration purposes. Pulse train (44a xxx 44n) becomes widen while pulse off-time width (43) becomes smaller, simultaneously. Conversely, opposite pulse shaping occurs when circuit (80) of Figure (3-5) is calibrated in reverse order.

Diagrams

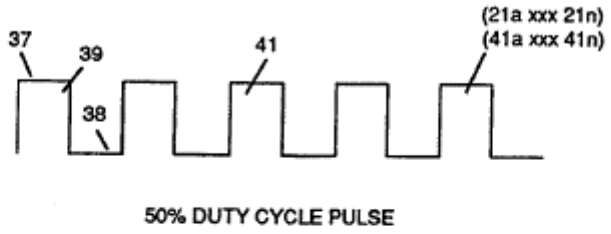


FIGURE 3-16: VARIABLE CLOCK PULSE TRAIN

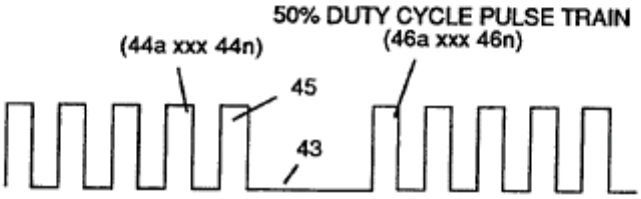


FIGURE 3-17: GATED PULSE TRAIN

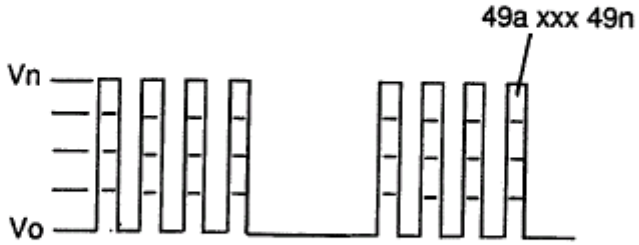


FIGURE 3-18: VARIABLE AMPLITUDE PULSE TRAIN

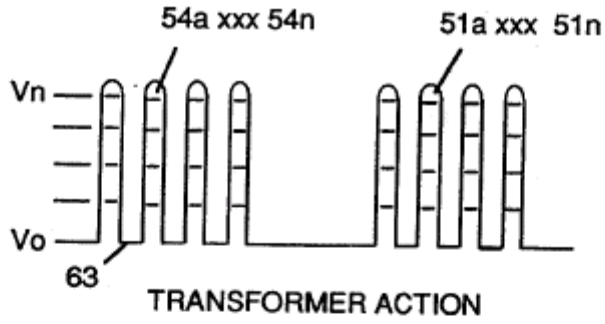


FIGURE 3-19: SETUP VOLTAGE PULSE TRAIN

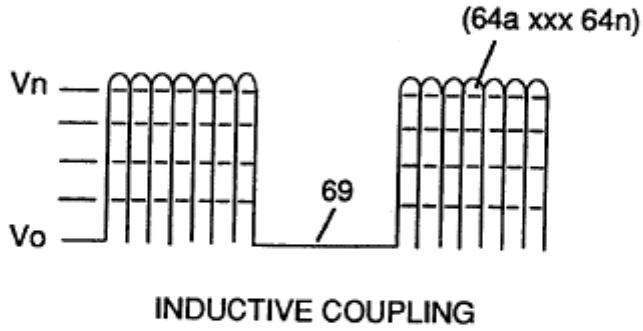


FIGURE 3-20: GATED UNIPOLAR PULSE TRAIN

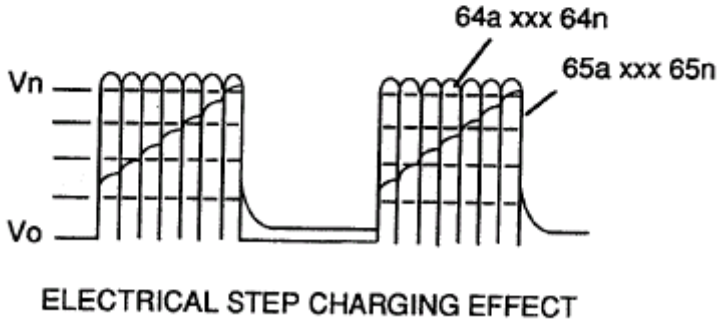


FIGURE 3-21: RESONANT CHARGING PULSE TRAIN

My thoughts

- Frequency range and duty cycle - 1 to 100khz and 1 to 99% duty cycle
- Voltage amplitude - 1 to 12 volt (output pulse generator)
- Gate time - 0 to 10sec maybe more?

Transformer

Patent Quote

"In the Example of a fuel cell circuit of FIG. 1, a water capacitor is included. The step-up coil is formed on a conventional torroidal core formed of a compressed ferromagnetic powdered material that will not itself become permanently magnetized, such as the trademarked "Ferramic 06# "Permag" powder as described in Siemens Ferrites Catalog,CG-2000-002-121, (Cleveland, Ohio) No. F626-1205. The core is 1.50 inch in diameter and 0.25 inch in thickness. A primary coil of 200 turns of 24 gauge copper wire is provided and a coil of 600 turns of 36 gauge wire comprises the secondary winding**."**

"Resonance in the circuit was achieved at a 26 volt applied pulse to the primary coil of the torroid"

Important note

Well that's only a step up transformer of 3 times = 78 volts, so how do we get higher voltage as stated in the patent (1000 volts) across the Cell.????

Maybe the primary was pulsed with around 200 volts giving a output on the secondary of around 600 volts and then the inductor doubled the voltage across the cell? I will explain how the inductor does this in the next section - Anode Inductor (step charging).

Quote from the Hydrogen Fracturing Process - Technical Brief reference page 3-7

Voltage Intensifier Circuit (60)

By integrating and joining together variable voltage amplitude control signal (318 xxx 32n) of Figure (3-15) with variable controlled switch-gate (49a xxx 49n) of Figure (3-18) across primary coil (26) of Figure (3-22), variable amplitude pulse-train (51a xxx 51n) of Figure (3-19) is electromagnetically coupled (transformer action) to secondary coil (52) of Figure (3-22) by way of pulsing core (53) of Figure (3-23) as to Figure (3-22).

Analog voltage signal (32a xxx 32n) of Figure (3-15) allows pulse train (51a xxx 51n) voltage amplitude (V0 xxx Vn) of Figure (3-19) to vary from one up to twelve volts (battery supply _28_ of

Diagrams

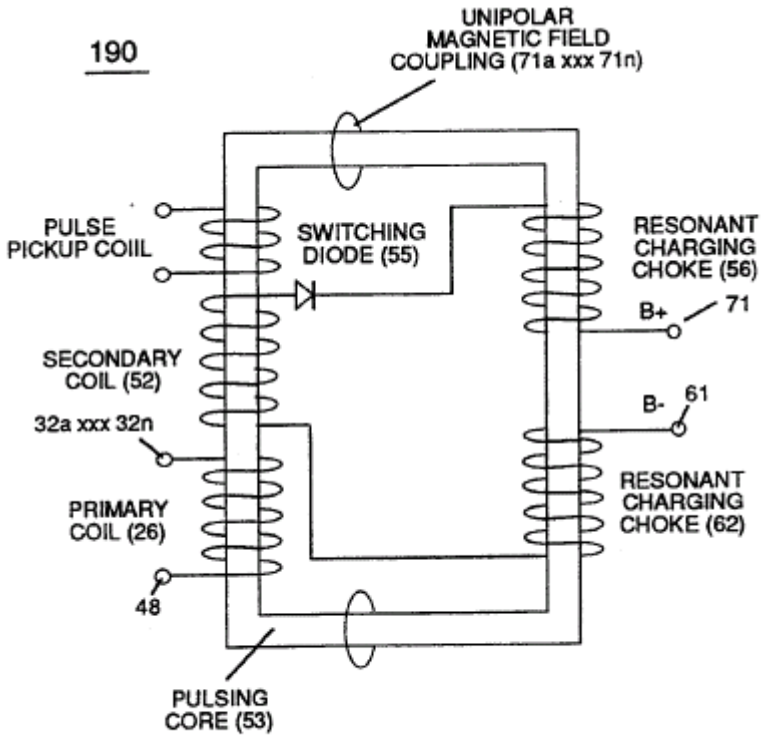


FIGURE 3-23 : PULSING CORE CONFIGURATION

My thoughts

- Design the step up transformer capable of frequency range at least to 100khz
- Design the transformer to step up voltage to a minimum secondary output of 500volts
- The transformer might consume 4 amp so transformer secondary and VIC may have to be designed to cope with this load.

Anode Inductor (step charging)

Patent Quote

"As the stepped-up pulse enters first inductor (formed from 100 turns of 24 gauge wire 1 inch in diameter), an electromagnetic field is formed around the inductor, voltage is switched off when the pulse ends, and the field collapses and produces another pulse of the same polarity; i.e., another positive pulse is formed where the 50% duty cycle was terminated. Thus, a double pulse frequency is produced; however, in a pulse train of unipolar pulses, there is a brief time when pulses are not present.

By being so subjected to electrical pulses in the circuit of FIG. 1, water confined in the volume that includes the capacitor plates takes on an electrical charge that is increased by a step charging phenomenon occurring in the water capacitor. Voltage continually increases (to about 1000 volts and more) and the water molecule starts to elongate**. "**

Important information

see this link here that explains the way voltage is increased through a positive pulsed - diode, inductor and capacitor circuit. current is kept moving because of the collapsing field. That is the only thing that should be noted from the link, the other information is mostly irrelevant to our needs.

also here writes how voltage is step up without a transformer using an inductor!

Quotes from the Hydrogen Fracturing Process - Technical Brief

Resonant charging choke (56) in series with Excitor-Array (160) of Figure (25) forms an inductor-capacitor circuit (180) of Figure (3-28) since Excitor-Array (66/67) acts and performs as an capacitor (dielectric liquid between opposite electrical plates) during pulsing operations. The dielectric properties (insulator to the flow of amps) of natural water (68) of Figure (3-28) as to Figure (3-26) (dielectric constant of water being 78.54 @ 20C in 1-atm pressure) between electrical plates (66/67) forms capacitor (57) , as illustrated in (170) of Figure (3-25). Water now becomes part of Voltage Intensifier circuit in the form of "resistance" between electrical ground (67) and pulse-frequency positive potential (66) ... helping to prevent electron flow within pulsing circuit (60) of Figure (3-22).

Inductor (56) and capacitor (57) properties of LC circuit (180) is therefore "tuned" to resonant at a given frequency. Resonant frequency (63) of Figure (3-19) can be raised or lowered by changing the inductance (56) and/or capacitance (57) valves. The established resonant frequency is, of course, independent of voltage amplitude, as illustrated in Figure (3-21) as to Figure (3-18). The value of inductor (56), value of capacitor (57), and the pulse-frequency (63) of voltage (Yo xxx Vn) being applied across the LC circuit determined the impedance of LC circuit (Figure 3-28).

The impedance of inductor (56) and capacitor (57) in series, Z series is given by

(Eq 1)

$$Z\,\text{series} = (Xc - Xl)$$

where

(Eq 2)

$$Xc = \frac{1}{2\pi fc}$$

(Eq 3)

$$Xl = 2\pi fl$$

Resonant frequency (63) of LC circuit in series is given by

(Eq 4)

$$F = \frac{1}{2\pi\sqrt{LC}}$$

Ohm's law of LC circuit (180) of Figure (3-28) in series is given by

(Eq 5)

$$Vt = IZ$$

The voltage across inductor (56) or capacitor (57) is greater than applied voltage (49) of Figure (3-18). At frequency close to resonance, the voltage across the individual components is higher than applied voltage (49), and, at resonant frequency, the voltage (Vt) of Figure (3-28) across both inductor and the capacitor are theoretically infinite. However, physical constraints of components and circuit interaction prevents the voltage from reaching infinity.

The voltage (VI) across inductor (56) is given by equation

(Eq 6) -

$$Vl = \frac{Vt\ Xl}{(Xl - Xc)}$$

Voltage (Vc) of Figure (3-28) across the capacitor is given by

(Eq 7)

$$Vc = \frac{Vt\ Xc}{(Xl - Xc)}$$

During resonant interaction, the incoming unipolar pulse train (64a xxx 64n) of Figure (3*20) as* to Figure (3-21) produces a step charging voltage effect across excitor-array (66/67) (57) *as*

so illustrated in Figure (3-21). Voltage intensity increases from zero "ground-state" to an high positive voltage potential in an progressive function. Once voltage-pulse (64) is terminated or switch-off, voltage potential returns to "ground-state" (61) or near ground-state (diode _55 maintains voltage charged across capacitor _57) to start the voltage deflection process over again as pulse train (64a xxx 64n) continues to be duplicated.

"Voltage intensity or level across excitor anay (57) can exceed 20,000 volts due to circuit (60) interaction and is directly related to pulse train (64a xxx 64n) variable amplitude input.

Inductor (56) is made of or composed of resistive wire to further restricts D.C. current flow beyond inductance reaction (Xl), and, is given by

(Eq 8)

$$Z = \sqrt{R_I^2 + (X_l - X_c)^2}$$

Quotes from the Hydrogen Fracturing Process - Technical Brief 7-3

Component Reactance to D.C. pulsing transforms inductor (614) of Figure (7-1) / Capacitor (E9/E10) of Figure (7-11) LC circuit of Figure (7-2) into an Resonant Charging Choke (614) which steps up an unipolar oscillation of an given charging frequency with the effective capacitance of an pulse-forming network (64a xxx 64n) of Figure (7-1) as to (600) of Figure (6-3) in order to charge Voltage Zones (E9/E10) to an higher potential beyond applied voltage input ... interacting Distributed Capacitance (Cda xxx Cdn) and Distributed Inductance (DIa xxx DIn) of Figure (7-3) of Inductor Coil (614) of (7-1) with "Electrical Charging Effect" brought on by the

Diagrams

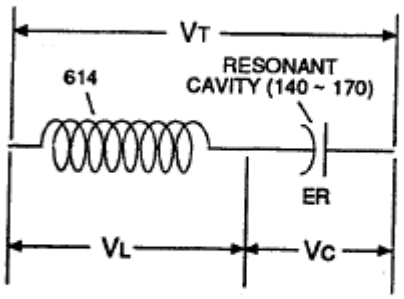


FIGURE 7-2: LC CIRCUIT

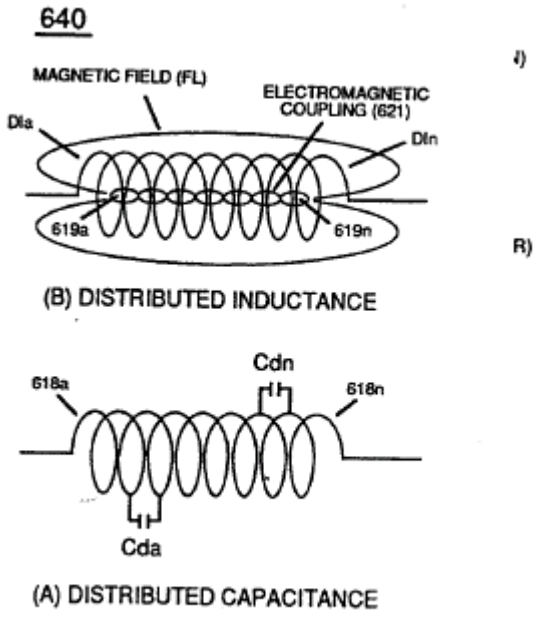


FIGURE 7-3: COIL INTERACTION

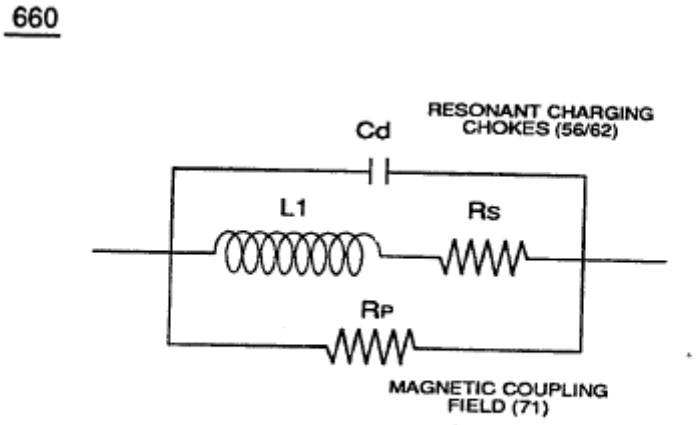


FIGURE 7-5: INDUCTANCE CHARGING EFFECT

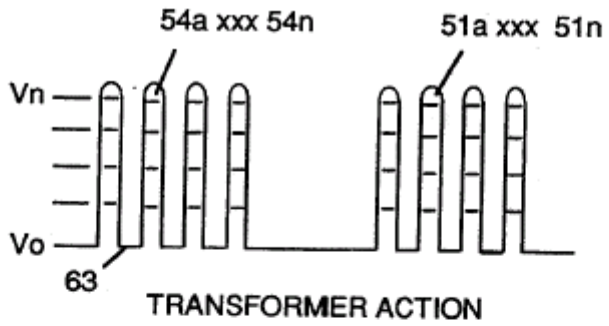


FIGURE 3-19: SETUP VOLTAGE PULSE TRAIN

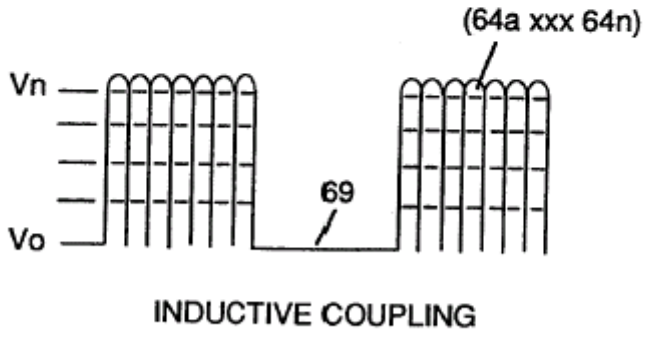


FIGURE 3-20: GATED UNIPOLAR PULSE TRAIN

Important Note

Notice on the graph below how the step charging gradually levels out? It follows a Resistor capacitor universal time constant curve.

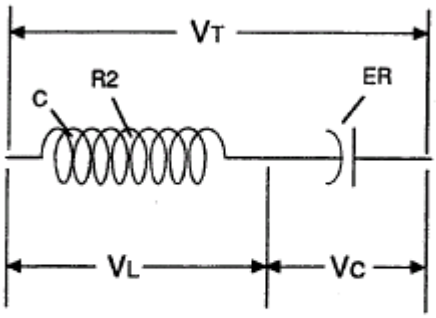


FIGURE 1-2: LC CIRCUIT

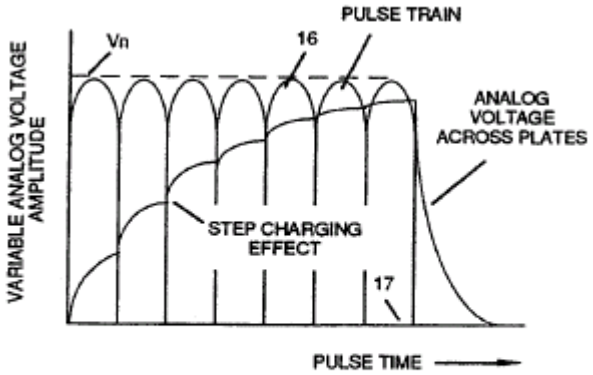


FIGURE 1-3: APPLIED VOLTAGE TO PLATES

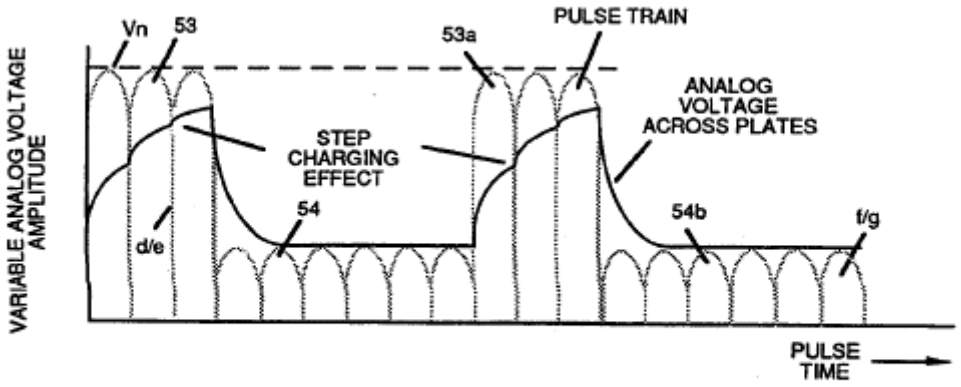


FIGURE 1-4: APPLIED VOLTAGE TO RESONANT CAVITY

Important note

Also note in the diagram above figure (1-4) the voltage on the gate pulse is not fully switched off this may be a necessity to sustain resonance. I don't know?

Quote from the Hydrogen Fracturing Process - Technical Brief pg - 7-7

Inductance Reactance directly determines "Stored" Energy (Wa) Which is controlled by input Voltage Potential attenuated or varied by way of Voltage Amplitude (Vo xxx Va xxx V b - Vf xxx Vg xxx Vn) of Figure (7-13) and/or Gated Pulse-Frequency (49a xxx 49n - T3 - 49a xxx 49n), or both.

Inductance Reactance performs several functions simultaneously or to given stimuli: increases applied voltage amplitude (Vo - Vn), doubles input frequency (64a * 64b) when 50% Duty Cycle Pulse (Tl = T2) is inputted, effectuates "Step Charging Effect" (680) of Figure (7-7) when Pulse off-time (T2) is less than Pulse on-time (Tl) ... determining voltage swing from highest voltage level (Vn) to volts switch-off point (Vff), and establishing Impedance (FL) which minimizes heat loss of electrical input power (49) by impairing electron movement.

Inductor (Ll) acts and performs in like manner to Inductor (L2) since both Inductor (L1/L2) are physically the same size and shape.

Quote from the Hydrogen Fracturing Process - Technical Brief pg - 7-10

Capacitance Reactance

Capacitance Reactance is determined by the insulation resistance (Rs+ Re) and Inductance (LIIL2) interacting together during D.C. Pulsing.

Dielectric property of water opposes amp leakage (Re) while another property of water takes-on an "Electrical Charge". Water temperature (Rt) (cool-to-the-touch) keeps (Re) constant since amp flow remains minimal. Plate Inductance (Lc) is Inductance Reactance of Inductor (L1)

and Inductance Reactance of Inductor (L2) in series with Resonant Capacitor (140 -170) of Figure (7-6) as to (690) of Figure (7-8).

In terms of Component Reactance, Inductors (LIIL2) should always be larger than Capacitor (ER) of Figure (7-2) in order to maximize amp restriction to enhance "Voltage Deflection" *(SS'* - 617a xxx 617n - RR') of Figure (7-4) and, is expressed by :

(Eq 24)

$$Z = X_L - X_C$$

My thoughts

- Pulse inductor and identify step charging with an oscilloscope or calculate it somehow to come to approx value then tune into it.
- Measure voltage with high voltage probe and oscilloscope
- Apply gate time to regulate gas flow

Cathode inductor

(current restriction due to inductance reactance)

Patent

Stan is careful in the patent not to talk about this very important part of the circuit, this is probably the most important part to the technology!!!

frequency of the pulse generator is tuned into the point where the inductor restricts the most amount off current.

This is because inductors does not like high frequency pulses and they restrict current and at certain frequency can block current nearly completely. This is because of the inductive reactance.

Read more here. I know the links refer Alternating current at a certain frequencies but it would probably occur with dc pulses aswell, more testing/experimenting needs to be done.

link 1

chokes

calculator

IMPORTANT QUOTES

Quotes from the Hydrogen Fracturing Process - Technical Brief 3-10

> Variable inductor-coil (62) of Figure (3-22), similar to inductor (56) connected to opposite polarity voltage zone (67) further inhibits electron movement or deflection within voltage intensifier circuit (60). Movable wiper arm (73) of Figure (3-22) fine "tunes" "resonant action" during pulsing operations. Inductor (62) in relationship to inductor (56) electrically balances the opposite electrical potential across voltage zone *(66167)*.

From the Hydrogen Fracturing Process - Technical Brief pg Appx B 01

> Note 1) The Electron Inhibiting Effect (631) of Figure (7-6) to cause "Electron Clustering" (Grouping/collecting negative charged particles at a given point) (700) of Figure (7-9) to produce "Negative Voltage Potential" (B-) at one side of Water Gap (Cp) of Figure (7-8) is accomplished by low electrical power input (Tab 38) when Choke-Coil (62) of Figure (7-1) magnetic field (FL2) (690) of Figure (7-8) during pulse on-time (49) impede "Electron-Flow" since electron mass is composed of electromagnetic matter which interacts with magnetic field strength (FL2). Capacitance Charging Effect (628) prevents amp influxing away from Water Gap (Cp) in a similar manner ... producing "Electrical Stress" (SS' - RR') (B+/B-) across Water Gap (Cp) since both Choke-Coils (56/62) conducts voltage potential (Negative or Positive) during pulsing operations.

Quote from the Hydrogen Fracturing Process - Technical Brief

Variable inductor-coil (62) of Figure (3-22), similar to inductor (56) connected to opposite polarity voltage zone (67) further inhibits electron movement or deflection within voltage intensifier circuit (60). Movable wiper arm (73) of Figure (3-22) fine "tunes" "resonant action" during pulsing operations. Inductor (62) in relationship to inductor (56) electrically balances the opposite electrical potential across voltage zone *(66167)*.

Since pickup coil (52) is also composed of or made of resistive wire-coil, then, total circuit resistance is given by

(Eq 9)

$$Z = R_I + Z_2 + Z_3 + R_E$$

where, RE is the dielectric constant of natural water.

Ohm's law as to applied electrical power, which is

(Eq 10)

$$E = IR$$

where,

(Eq 11)

$$P = EI$$

Whereby,

electrical power (P) is an linear relationship between two variables, voltage (E) and amps (I).

Quote from the Hydrogen Fracturing Process - Technical Brief reference page 7-5

Inductance Reactance (Rs - Cd - FL)

Inductance Reactance occurs when resistance (Rs), capacitance (Cd), and Inductance (FL) interacts together during D.C. Pulsing (49a xxx 49n), as schematically depicted in (690) of Figure (7 -8).

Inductance Reactance not only increases voltage across water-capacitor (ER) beyond applied Voltage Potential (626) of Figure (7-7) but, also, establishes "Impedance Field" (FL) across Inductors (LI-L2) of Figure (7-6) which acts and performs as Resonant Charging Chokes (614/615) of Figure (7-1) once placed on opposite side of capacitor (ER) forming Resonant voltage Effect Circuit (670) of Figure (7-6), as illustrated in (620) of Figure (7-1) as to (690) of Figure (7-8). Both Inductors (LI/L2) are Bifilar wound in equal length to optimize the electromagnetic field strength (FL) in equal electromagnetic intensity (FLI = FL2) to encourage and promote "Electron Bounce" phenomenon (700) of Figure (7-9) while adjusting (programmable pulse wave-form) input signal Pulse-Frequency (49a xx 49n) to "tune-in" to the "dielectric property" (Re) of water (85) ... causing amp flow to be reduce to a minimum value while allowing voltage potential (627) of Figure (7-7) to go toward infinity if the electronic components would allow it to happen, as graphically illustrated in (750) of Figure (7-14). Inductance Field (L1-FL1) performs "Capacitance Charging Effect" (628); while, at the same time, Inductor Field (L2- FL2) restricts electron movement through VIC Impedance Network Circuit (620) of Figure (7-1) since Inductance Field (FL2) locks onto Electrons Magnetic Field (647) of Figure (5-9) to block the movement of electron flow toward Positive Voltage Potential (66) ... thereby preventing and inhibiting electron-flow to pass through or arc-over capacitor water-gap (Cp) of Figure (7-8) such electron blocking action is herein called "Electron Inhibiting Effect"' (631), as denoted in
(670) of Figure (7-6) as to (750) of Figure (7-14). At elevated.or higher amplitude voltage levels (xxx Ve xxx Vf xxx Vn), primary electromagnetic coupling field (Rp) of Figure (7-8) transmitted by

way of Inductance Pulsing-Core (190) of Figure (3-23) as to VIC Coil Assembly (580) of Figure (6-1) enters into and passes through both Inductors (LIIL2) simultaneously and offers not only further electron-flow restriction (Rp l/Rp2) to both Inductor Chokes (56/62) but automatically increases voltage potential (xxx V g xxx Vh xxx Vn) of opposite voltage intensity of equal magnitude (66/67) across Resonant Cavity (140 -170) ... overcoming any potential loss of pulse signal due to resistive interaction (Rsl/Rs2) of either or both Inductor Cores (L1/L2) wire-material to the formation of Inductance Fields (FLl!FL2) during reoccurring pulse on-time (T1a xxx T1n). Electron Inhibiting Effect (631) in direct relationship to Voltage Enhancement Effect (528) is accomplished since stainless steel 430F/FR wire-material is "Electromagnetic Inductive" to incoming electromagnetic flux-lines (71a xxx 71n) (Rp) without (s/s) inductor-wire-coil (L1/L2) becoming permanently magnetized ... paralleling and performing the same electromagnetic characteristic of copper wire when it comes to magnetic field reformation (Rp - Rp 1 - Rp2) of Figure (7-8), as further illustrated in electromagnetic coupling fields (71 - 511 - 512) of Figure (6-1) that encourages, brings-on, and perform Voltage Inducement Process (580) of Figure (6-1) as to (620) of Figure (7-1) without amp "influxing" (inhibiting amp flow) between Positive Voltage Potential (66) and Negative Voltage Potential (67) electtically applied across Resonant Cavities (140 -170).

Quote from the Hydrogen Fracturing Process - Technical Brief pg - 7-10

Capacitance Reactance

Capacitance Reactance is determined by the insulation resistance (Rs+ Re) and Inductance (LIIL2) interacting together during D.C. Pulsing.

Dielectric property of water opposes amp leakage (Re) while another property of water takes-on an "Electrical Charge". Water temperature (Rt) (cool-to-the-touch) keeps (Re) constant since amp flow remains minimal. Plate Inductance (Lc) is Inductance Reactance of Inductor (L1)

and Inductance Reactance of Inductor (L2) in series with Resonant Capacitor (140 -170) of Figure (7-6) as to (690) of Figure (7-8).

In terms of Component Reactance, Inductors (LIIL2) should always be larger than Capacitor (ER) of Figure (7-2) in order to maximize amp restriction to enhance "Voltage Deflection" *(SS'* - 617a xxx 617n - RR') of Figure (7-4) and, is expressed by :

(Eq 24)

$$Z = X_L - X_C$$

Quote from the Hydrogen Fracturing Process - Technical Brief pg - 7-7

Inductance Reactance directly determines "Stored" Energy (Wa) Which is controlled by input Voltage Potential attenuated or varied by way of Voltage Amplitude (Vo xxx Va xxx V b - Vf xxx Vg xxx Vn) of Figure (7-13) and/or Gated Pulse-Frequency (49a xxx 49n - T3 - 49a xxx 49n), or both.

Inductance Reactance performs several functions simultaneously or to given stimuli: increases applied voltage amplitude (Vo - Vn), doubles input frequency (64a * 64b) when 50% Duty Cycle Pulse (T1 = T2) is inputted, effectuates "Step Charging Effect" (680) of Figure (7-7) when Pulse off-time (T2) is less than Pulse on-time (T1) ... determining voltage swing from highest voltage level (Vn) to volts switch-off point (Vff), and establishing Impedance (FL) which minimizes heat loss of electrical input power (49) by impairing electron movement.

Inductor (L1) acts and performs in like manner to Inductor (L2) since both Inductor (L1/L2) are physically the same size and shape.

My thoughts

- Measure current entering the cell
- Due to the Inductive reactance pulse the inductor until minimum current enters the cell
- Maybe have it variable to make fine adjustments

Water Capacitor

Patent Quote

"In an example of the circuit of FIG. 1 (in which other circuit element specifications are provided above), two concentric cylinders 4 inches long formed the water capacitor of the fuel cell in the volume of water. The outside cylinder was 0.75 inch in outside diameter; the inner cylinder was 0.5 inch in outside diameter. Spacing from the outside of the inner cylinder to the inner surface of the outside cylinder was 0.0625 inch."

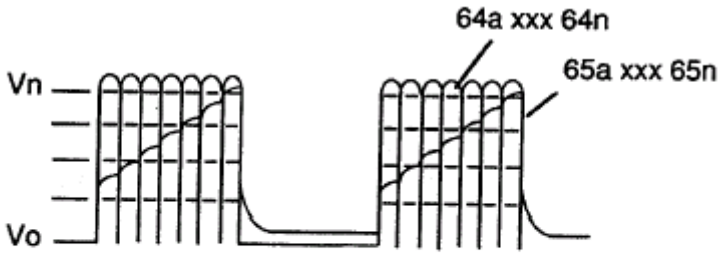
Remember when I give these quotes I'm not saying this is the only way to do it! patents just give bare bones information this is probably bordering on the minimum requirement to see any effect. That's why you have to look a little deeper. Here is some more info I found in the hydrogen fracturing book (technical brief)

Quote from the Hydrogen Fracturing Process - Technical Brief

Amp restriction beyond "resonant action" occurs when unipolar magnetic field coupling (71) of Figure (3-23) is allowed to simultaneously drop (pulsating magnetic field) across both resonant charging chokes (56/62) during pulsing operations since electron mass is a electromagnetic entity which is subject to inductor fields (56/62) produced by pulsating magnetic field (71a xxx 71n) of Figure (3-23). Amp leakage (electron coupling to water) to water bath (68) of Figure (3-24) is further prevented by encapsulating resonant cavity (57) in delrin material (72) of Figure (3-25) which is an electrical insulator to high voltage. Delrin material (72) insulator value remains intact since insulation material (72) is resilient to water absorption.

Inherently, then, pulsing core (53) of Figure (3-23) aids amp restriction while voltage intensifier circuit (190) is being "tuned" (adjusting pulse train 49a xxx 49n pulse-frequency 63 via pulse frequency generator 70 of figure 3-5) to match the resonant frequency properties of water bath (68) of Figure (3-22), as illustrated in Fuel Cell (120) of Figure (3-24). The resultant interfacing voltage circuit (190), now, exposes water molecule (210) of Figure (3-27) to a pulsating high intensity voltage field (65a xxx 65n) of opposite polarity (66/67) while restricting amp flow within circuit (60) of Figure (3-22).

Diagrams



ELECTRICAL STEP CHARGING EFFECT

FIGURE 3-21: RESONANT CHARGING PULSE TRAIN

FIGURE 3-24: FUEL CELL

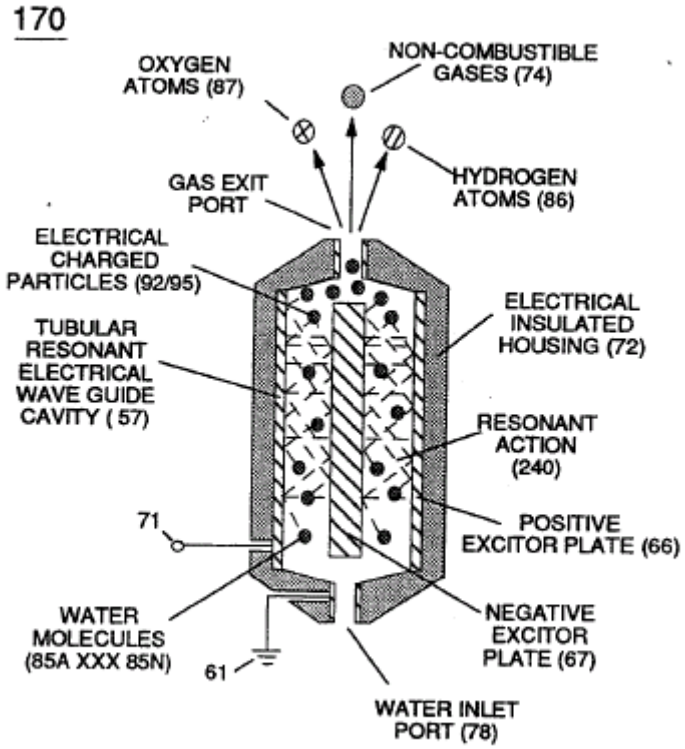


FIGURE 3-25: RESONANT CAVITY

My thoughts

- Initially try submerging tubes in water when testing the VIC
- Alternatively, insulate the tube and do not submerge in water but fill it up with water
- If that doesn't work try to make it smaller to lower the capacitance

Electron Bounce

I have not yet come had time to understand this. If anyone has any ideas?

Electron Bounce Phenomenon

High Voltage Potential of Difference (VO - Vn) *(SS'* - 617 -RR') is accomplished when magnetic flux lines of force (71a xx 71) (Rp) emanating away from closed-loop magnetic pulsing core (53) of Figure (190) penetrates Inductance coil-windings (52 - 56 - 62) simultaneously during each and every pulse on-time (Tla xxx T1n) as programmable pulse-train (49a xxx 49n T3 - 49a xxx 49n) is adjusted to "Tune - in" to the dielectric property of Water (Re) .... causing mutual inductance (µ1) (see equations Eq 28 thru Eq 30) to transform Distributed Capacitance (Cda xxx Cdn) of Figure (7-3) of each inductance coils (52 - 56 - 62) into a coherent Voltage Potential (Yo •..• Vn) equaling the sum of Voltage Potential (Vp) developed across each Pickup Coils (VpT + Vpl + Vp2) ..• producing Dynamic Voltage Potential (600) of Figure (6-3) during repetitive pulsing (49a xxx 49n - T3 - 49a xxx 49n) ... setting up and performing pulsating Opposite Electrical Attraction Fore (SS' ~ 617 ~ RR' - T3 - SS' ~ 617 - RR') of Figure (7-4) as to Voltage Dynamics (220) of Figure (3-29) ... triggering Hydrogen Fracturing Process (90) of Figure (5_5) as to (100) of Figure (4-8) ... instantly releasing thermal explosive energy (gtnt) (16) from Water (85) on demand, as illustrated in Taper Resonant Cavity (590) of Figure (6-2) as to (70) of Figure (4-5). The resultant Dynamic Voltage Potential of Difference (opposite electrical attraction force) *(SS'* - 617 •... RR') is in balance phase of equal electrical intensity (66 = 67) of opposite polarity (positive electrical voltage potential _66 equals negative electrical Voltage potential 66 since the voltage Coefficient of Inductance (FL1/FL2), Voltage Coefficient of Capacitance (Cd1/Cd2), and voltage Coefficient of Resistance (Rs1/Rs2) across choke coils (L1/L2) are the same values ... allowing, Voltage Bounce Phenomenon (700) of Figure (7-9) to be preformed.

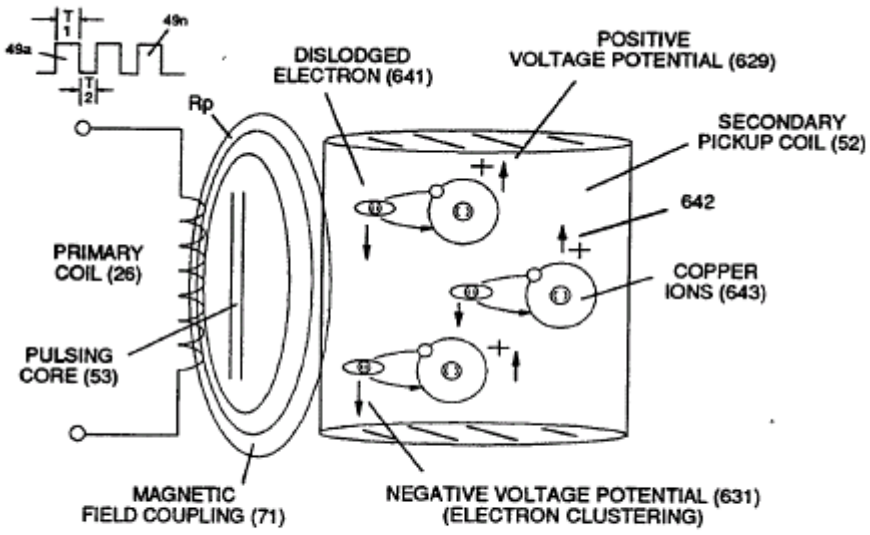
Magnetic Field Coupling (71) of Figure (7-9) entering into and passing through Secondary Coil-winding (52) of Figure (7-8) causes and produces copper ions (643a xxx 643n) (Positive Charged atoms 542a xxx 542n having missing electrons) when moving external electromagnetic field strength (71a xxx 7In) is sufficient enough to dislodge electromagnetically charged electrons (64Ia xxx 64In) from copper atoms making up copper wire material (52). Collectively, the resultant positive electrical charged copper ions (642a xxx 642n) added together produces Positive Voltage Potential (629) being electrically applied to choke-coil (56); whereas, the "Liberated" negative electrical charged electrons (64Ia xxx 64In) added together provides Negative Voltage

Potential (631) to the opposite end of Secondary Wire (52) being electrically connected to choke coil (62). Once Secondary Coil-winding (52) is de-energized by the removal (collapsing magnetic field during pulse off-time T2 of external Magnetic Field (71), the dislodged electrons (641a xx 641n) return to positive charged copper ions (642a xx 642n) ... terminating and switching off opposite voltage potential (629 - 631) when positive electrical state of the copper atoms changes back to net electrical charge of zero. Sustaining and maintaining the resultant induced Voltage Potential (Vo - Vn) without "Electron Discharged" (inhibiting electron flow) through Choke Coil (62) while, at the same time, inhibiting (preventing) any additional or other electrons from entering into Secondary copper wire-zone (52) by way of Choke Coil (56) is herein called "Electron Bounce Phenomenon" (EbP), as illustrated in (700) of Figure (7-9).

Electrically Interlinked serially together, Electron Bounce Phenomenon (EbP) , Voltage Coefficient of Inductance (Fll/F12), Voltage Coefficient of Capacitance (Cdl/Cd2), Voltage Coefficient of Resistance (Rsl/Rs2), and dielectric Coefficient of Water resistance (Re) allows Voltage Potential (Vo - Vn) of opposite electrical polarity to perform work *(SS'* _ 617 _ RR') without amp influxing "' thus, not allowing the introduction of electron flow into Hydrogen Fracturing Process (90) of Figure (5-5) during Voltage Stimulation *(SS'* - 617 _ RR') ... causing "electron clustering" (641a xxx 641n) to take place within Copper Wire Zone (52) during pulse on-time (Tl) ... inhibiting "electron flow" to maintain opposite voltage potential (66/E9 _ 67/E10) across Resonant Water Gap (616) during the process of converting water-fuel (85) into instant thermal explosive energy (gtnt) ... therefore, producing a physical force-yield (Fy) during gas-ignition (70) of Figure (4-5) which is directly related to the liquid volume of water (85) per injection cycle and applied Resonant Voltage Intensity (Yo -Vn), as illustrated in (590) of Figure (6-2) as to (90) of Figure (5-5) .

. Of course, in practical terms of component interaction, a minute amount of amp leakage is present and does occur due to Electronic Component Limitations but is negligible as to the overall performance of the Hydrogen Fracturing Process (590) of Figure (6-2) when being subjected to either one of traveling Electrical Voltage Wave-forms (730a - b - c) of Figure (7-12), see Voltage Graph (750) of Figure (7-14) once again.

Diagrams



FIGUREM 7-9: ELECTRON BOUNCE PHENOMENON (EbP)

My thoughts

- not yet understood?

Resonant action (High gas yield)

Stanley Meyer Identified two stages of gas production these are

- Electrical Polarization process (minimal gas yield))
- Resonant gas production (high gas yield)

I feel that resonant frequency in the VIC is the condition when you achieve step charging across the capacitor at a high voltage levels and the inductance reactance of the cathode inductor is adjusted with either pulse frequency or inductance is varied to restrict electron flow.

for a more in depth explanation on what occurs and voltage level leading to and during resonant action see here and here this will help you tune to resonance

also here is some more information that will help

Quote from the Hydrogen Fracturing Process - Technical Brief pg 1-3

> During resonant interaction, the incoming unipolar pulse-train (H) of Figure (1-1) as to Figure 1-5) produces an step-charging voltage-effect across Excitor-Array (ER), as illustrated in Figure *i1-3)* and Figure (1-4). Voltage intensity increases from zero 'ground-state' to an high positive voltage potential in an progressive function. Once the voltage-pulse is terminated or switched-off, voltage potential returns to "ground-state" or near ground-state to start the voltage deflection process over again.
>
> Voltage intensity or level across Excitor-Array (ER) can exceed 20,000 volts due to circuit (AA) interaction and is directly related to pulse-train (H) variable amplitude input.

Quote from the Hydrogen Fracturing Process - Technical Brief pg 3-17

> In cases where applied voltage amplitude is to remain constant while promoting Resonant Action during control-state, incoming pulse train (64a xxx 64n) is varied independent of voltage amplitude to attenuate voltage intensity (66/67) which, in turns, effect gas production. In other applications, Voltage amplitude (66/67) in direct relationship to pulse-train (64a xxx 64n) may be varied together in a progressive manner to further control gas production. Or pulse-train (64a xxx 64n) can remain constant while voltage amplitude is varied. In all cases, Resonant Action is being promoted to product hydrogen gas on demand.

I would really appreciate if you could contact me concerning any positive or negative feedback on this topic. There may be flaws in my logic. Please try to give me a reference or other factual evidence to back up your thoughts.

Michel, a researcher in France the has presented a preliminary report on his efforts to replicate the VIC and can be seen here (Sept 05)

Another researcher is working hard on a controller and transformer that will give the necessary capabilities to tune the WFC to resonance. more soon