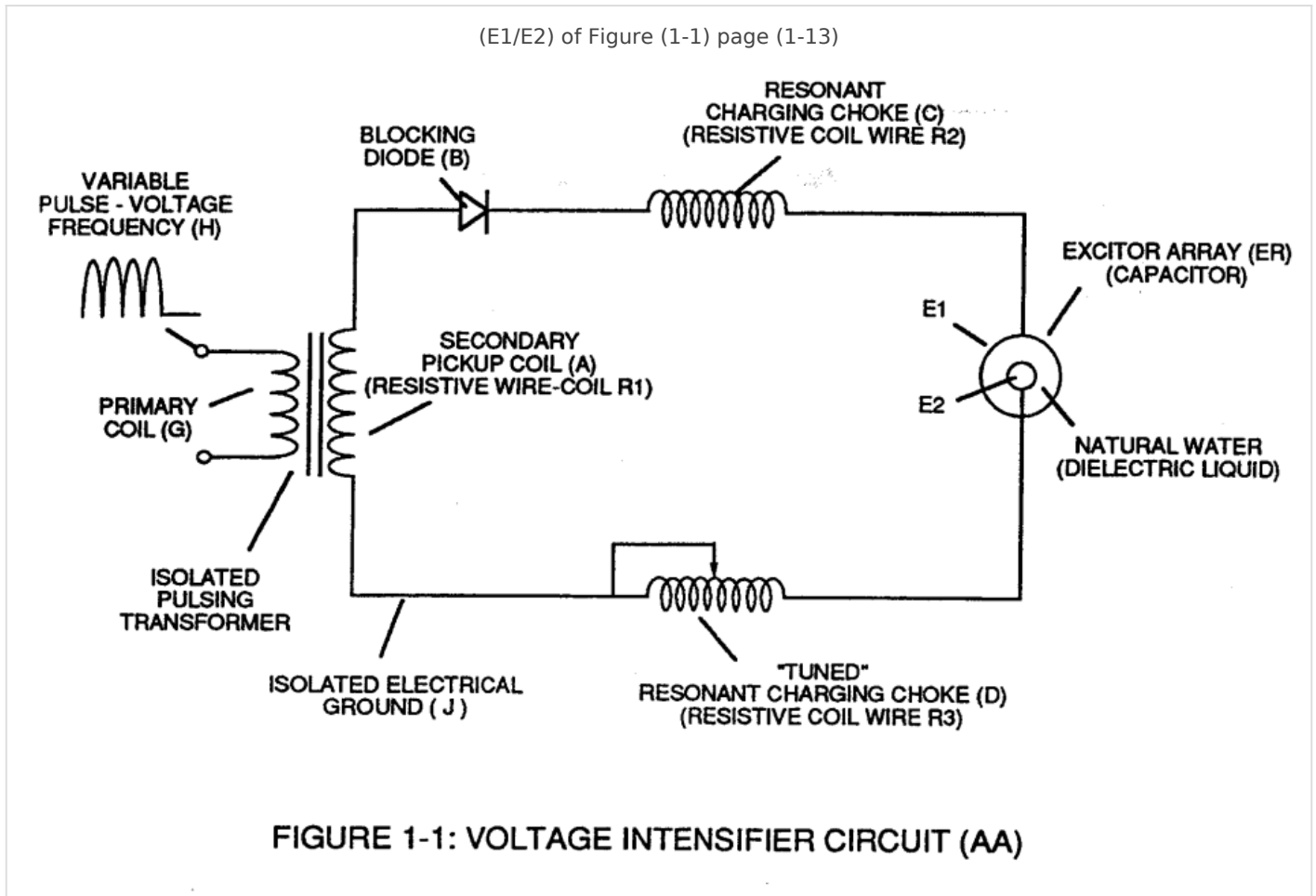


# Taper Resonant Capacitor (ERt)

**Capacitor** (ER) is automatically formed when dielectric liquid of water (Re) is placed between **Electrical Conducting Plates** (E1/E2) of Figure (1-1) page (1-13) ([Memo WFC 420](#)).



Stainless steel T304 material is used to form **Electrical Voltage-Plates** (E1/E2) which do "not" chemically interact (chemically inert) (Lab tested less than .0001/year decomposition rate) with liberated water gases (hydrogen <sub>86</sub>, oxygen <sub>87</sub>, and non-combustible gases W being exposed to an high intensity voltage pulse-field (64a xxx 64n) with negligible amp flow.

**Electrical Plates** herein called "**Excitor**" Plates or **Voltage Zones** (E1/E2) can take-on different configuration of shapes to maximize **Dynamic Voltage Potential** (600) of Figure (6-3) for different application of usage:

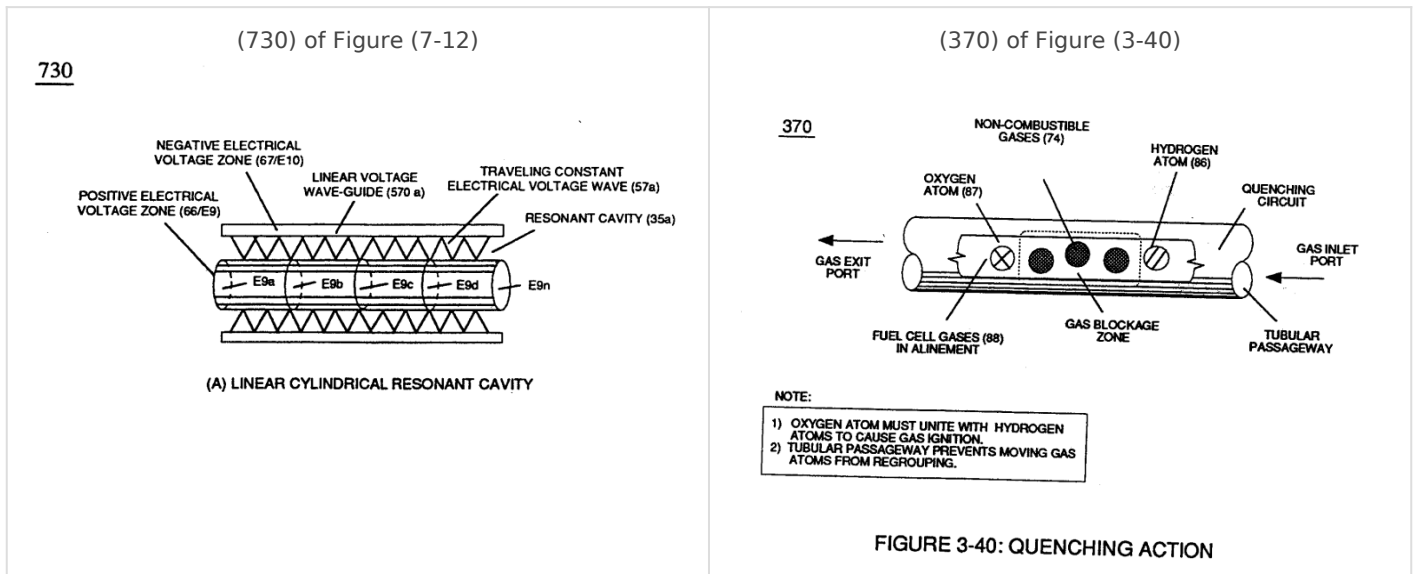
(35a) **Traveling Constant Electrical Voltage Wave** by way of linear cylindrical resonant cavity (Tubular Cavity 730A),

(35b) **Traveling Compressional** (concentrating electrical intensity) **Electrical Voltage Wave** by way of taper cylindrical resonant cavity (730B),

(35c) **Traveling Expanding Electrical Voltage** wave by way of non-linear cylindrical resonant cavity (730C)

... or any voltage surface combination thereof

... each resonant cavity design acting and functioning as a **Voltage Wave-guide** (570) and gap-size (35) sufficient enough to allow the "**Quenching Effect**" to take place, as illustrated in (730) of Figure (7-12) as to (370) of Figure (3-40).



The dielectric property of water (being 78.54 ohms @ 25° C) permits the storage of "**Electrical Charge**" when a potential voltage difference exists between **Electrical Voltage-Plates** (E1/E2) as to (E9/E10).

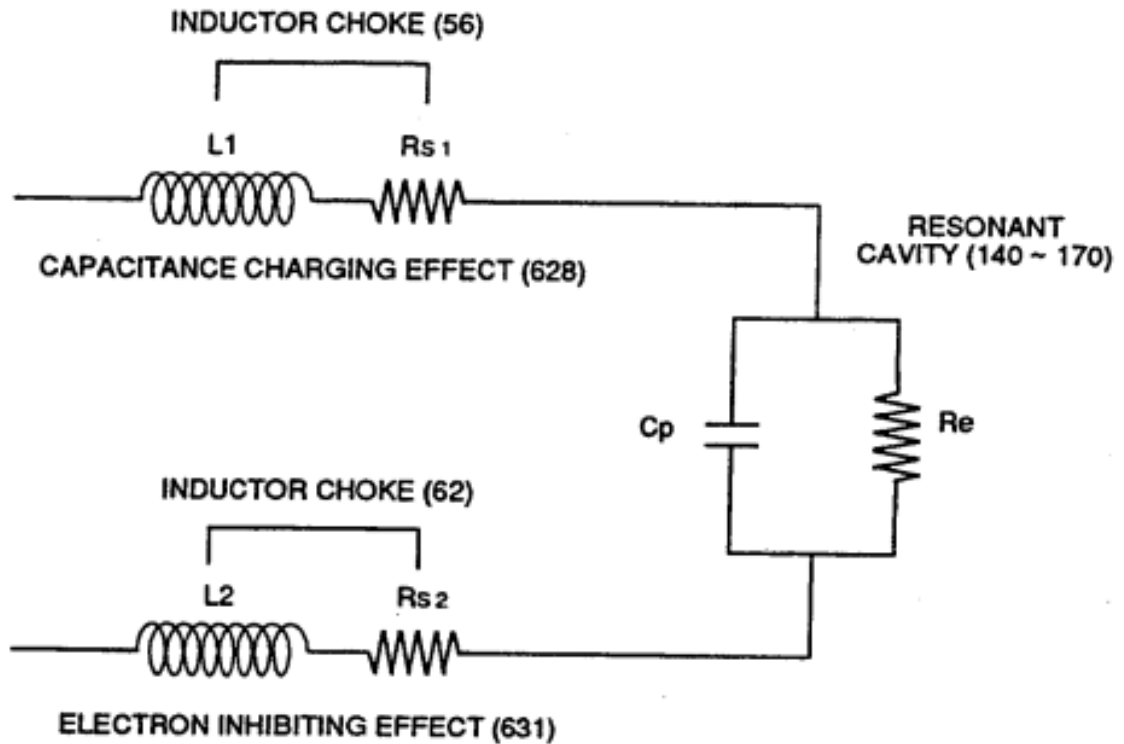


FIGURE 7-6: RESONANT VOLTAGE EFFECT

**Capacitance** ( $C_p$ ) of Figure (7-6) as to (690) of Figure (7-8) is determined by the surface area ( $A$ ) of **Electrical Voltage-Plates** ( $E1/E2 - E9/E10$ ), the distance ( $d$ ) between the **Electrical Plates** (in inches), and the **permittivity** ( $E_0$ ) of the dielectric property of water (85) and, is expressed in the following equation:

$$C = \frac{0.2249 e A}{d E_0} \text{ Picofarads} \quad (\text{Eq 21})$$

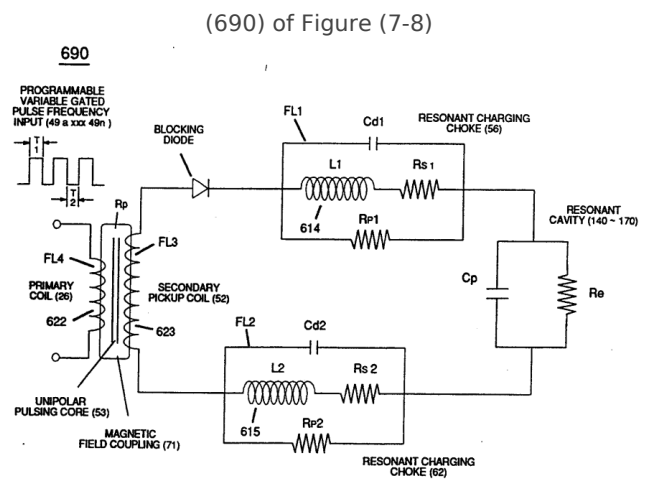


FIGURE 7-8: VIC MATRIX CIRCUIT

Where,

(Eo) is **Free-Space Permittivity of Water** established by **VIC Circuit** (690) of Figure (7-8) ability to restrict amp flow,

(e/Eo) Ratio is the **Dielectric Constant of Water**,

(A) is the surface Area of **Resonant Cavity** and, is expressed in the below equation:

(Eq 22)

$$\text{area } (A) = \frac{h}{2} (a + b) \text{ Taper Resonant Cavity}$$

**Where,**

(h) is longitudinal length of tapered resonant cavity,

(a) being exit pan circumference surface point (E9d) of Figure (6-2),

(b) being cylindrical circumference surface point (E9a) of Figure (6-2) where tapered surface starts,

(a) (b) circumference surface points (E9a)(E9d) respectively determined by below expressed equation:

(see diagram 720 of Figure 7-11)

(Eq 23)

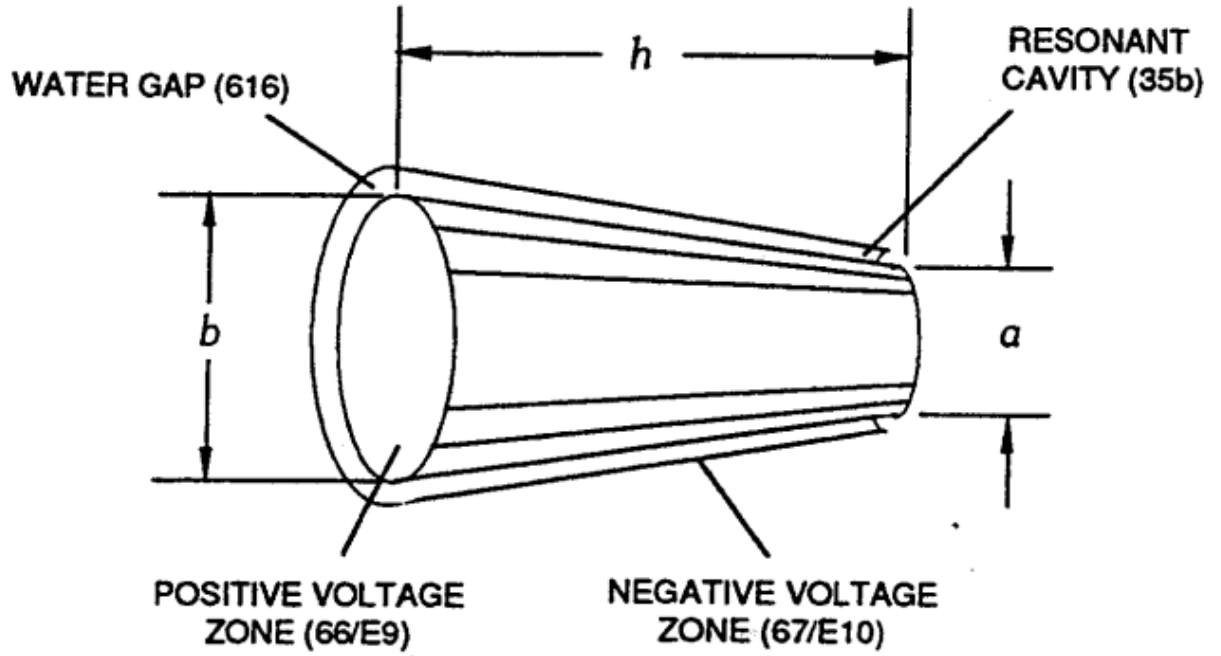
$$\text{Circumference Surface Point (E9)} = \pi D$$

**Where,**

(D) is diameter cross section of cylindrical surface at designated point (E9a - E9n),

(x) being mathematical constant 3.1416.

720



**FIGURE 7-11: TAPERED VOLTAGE WAVE-GUIDE**

Revision #8

Created 2023-12-13 05:32:47 UTC by Chris Bake

Updated 2023-12-20 04:43:51 UTC by Chris Bake