

Resonance in bifilar coil

<https://www.youtube.com/watch?v=mJSEZMNRLXA>

by Sergey Alexeev

00:04 Hello Cyril

00:05 so I gave you the complete schematic

00:11 I didn't put a ring here for

00:13 sync, but when it heats up

00:15 starts... in general, the effect goes away, self-powering disappears

00:20 so we have a gradient coil

00:25 here 38 meters, Tesla 19 meters

00:30 inductor is also 19 meters

00:33 on a gradient coil, three capacities of 0.1 each

00:37 microfarad

00:38 into resonance and here 0.5 microfarads but

00:43 this is a such set, well, in short, a little more

00:47 0.55 microfarads in the end if

00:52 turn off this capacitance (gradient coil's capacitor) and

00:55 use just

00:56 inductor then our frequency will be...

01:00 will be in total 8.6 or 8.7 kilohertz but a

01:09 if you just connect separately to

01:12 this coil,

01:14 on gradient coi 0.3 microfarad also

01:17 the frequency will be low, but in the end if

01:19 at the same time we connect them both,

01:21 I wound this coils in reverse

01:24 we get current on one side of inductor

01:28 and on gradient coil

01:32 we get

01:34 galvanic potential

01:37 so we combine voltage and current

01:41 what's interesting

01:45 with this configuration, if we connect both

01:47 we get not 8 kilohertz

01:51 frequency goes up two times

01:55 push pull here now work on 16 khz

01:59 that's how it turns out if at 8

02:02 kilohertz resonance, we have a current with one

02:06 side of the coil, in general current and current is different

02:10 voltage sides are all currents here too

02:14 that is, the voltage and current of this phase is not

02:17 flipped 180 degrees, but

02:19 when frequency twice up it

02:22 resonates, phases flips

02:26 and this coil can work like this

02:31 a very interesting effect turned out

02:33 I have rectifier bridges

02:36 150EBU04 it is 150 ampere here

02:40 I put a fan on, but I even

02:43 didn't need it, they not getting hot at all

02:46 well, they stand a little warm

02:49 here, yes, I put it already fan on Tesla  
02:54 power supply 8 volts applied to this fan  
02:57 is spinning this is enough, so these  
03:01 filter capacitors well at our exit  
03:06 10 microfarad 450 volt power supply 24  
03:12 volts 8.5 amps its  
03:16 working at its maximum power well  
03:23 first grenade was wound in opposite directions  
03:25 now in one direction  
03:28 with that grenade it turned out to tune without a spark gap  
03:31 but with this it didn't work out  
03:33 last time it was, you watch scope...  
<cut>