

A new coil machine concept

Introduction

To my person: I'm living in Germany, since two years now I've problems with my joints and until July last year nobody could find the basic cause. In June a friend gave me the advice to take Lyme into account. I went to a medical doctor, a specialist for Lyme disease, and in July after some blood tests it was obvious that I'm suffering from Lyme.

I was looking for help also in the www and I found some forums with very interesting approaches to fight against Lyme. I bought the book "Lyme disease and rife machines" and after I've read it, it was clear for me to build a coil machine. I studied the description "How to build a rife machine" and I recognized that this concept is indeed very useful and serial resonance is the only way to provide the high voltages, which are necessary for higher frequencies to drive the required current, but I recognized too, that it is not very user friendly. A "normal" user would wish to select some frequencies from a list of possible/helpful frequencies, to select the time for each frequency and the coil machine should then be able to play this sequence without further user interventions like selecting the proper capacitors with switches or the right volume for the amplifier. A further disadvantage is that only one coil can be connected to the amplifier, which means that it is not possible to treat more than one infected area of the body at the same time. With an idea in the back of my head, I tried to build a first prototype for an automatic coil machine, which is capable to run a given sequence of frequencies and to provide current for three coils at the same time.

The concept

1. Variable frequency drive

To send a high current through a coil is a common task, if you have to control the speed of an e-motor. This task will be done by a frequency inverter or variable frequency drive (for a description, see http://en.wikipedia.org/wiki/Variable-frequency_drive). I looked for an inverter, which was able to provide a wide frequency range and to build a prototype, I found a device, with a frequency range from 0 to 1000Hz (voltage range: 0 to 480V). I bought a used one by Ebay for 80€ The frequency converter is amplifier and frequency generator in a single case, this is an advantage but also could be a disadvantage. With this concept, the maximum output frequency is limited to 1000Hz. As most of the lyme treat frequencies are lower than 1000Hz, I accepted this detriment. On the other side, you have the possibility to select voltages up to 480V, which are high enough for lower frequencies to drive the necessary current through coils without capacitors in series and not to forget, frequency inverters are build to drive 3-phase ac-motors, which gives you the possibility to run 1 to 3 coils at the same time.

2. Control-Unit

To control the frequency converter (select the output voltage and the frequency for a given time) I've developed a little control unit with a single chip microcontroller. It is also responsible to switch the capacitors for the selected frequency. All capacitors are switched in series and every capacitor can be bridged with a relay. As higher the frequency as more capacitors will not be bridged.

3. Coil and capacitors

The coil and the capacitors together with the switching unit are mounted in a single case. At the moment I'm using a 105mH coil. I've chosen a very little frequency inverter which is only able to provide 3 x 4A output current. As described in "How to build a rifle machine" a current of 15A is necessary to provide a magnetic field of 200Gauss. As the magnetic field strength is proportional to I (current) and N (winding), I selected four times the amount of the windings. This gives you advantages but also disadvantages. The advantage: You can run the machine without a time limit, because the coil (and the amplifier) will not overheat. The disadvantage: L is proportional to N^2 , which means that you have to provide higher voltages to drive the necessary current.

Conclusion

Actually, I build up capacitors for frequencies up to 800Hz and the unit runs reliable with two coils. For higher frequencies I'm using a AC-contact device. May be that this concept could be an impulse for people or companies, who like to build a more user friendly coil machine too.

Best wishes,

Bassinski