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Resonant systems for capturing electric charges from the earth and use of a method for transferring electric charges from the earth through electric power circuits

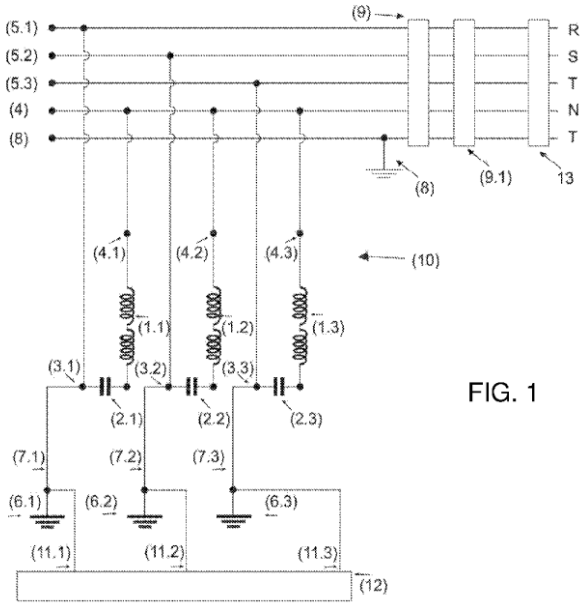

FIG. 1

Abstract

The present patent application relates to the improvement of the circuits disclosed in patent BR 10 2021 019838-9. The present application incorporates into alternating current electric power circuits the use of electric voltage-carrying circuits coupled directly to the earth through the use of the electric circuits disclosed in the present patent application, using the effect of resonance at the fundamental frequency to resonate and cause the electrification and polarization of the electric charges from the earth to transfer energy from the earth through the electric power circuits. The aim of the present invention is to achieve the transfer of electric charges from the earth by injecting an alternating flow of voltage and sinusoidal resonant current that pass through and close the electric circuit through the ground, causing electromagnetic interactions between the electric charge carriers, which cause the permanent transfer of energy at the fundamental frequency to

the alternating current electric circuits using the circuits disclosed in the present invention and the method herein for transferring electric charges from the earth, which use the circuits of the "resonant systems for capturing electric charges from the earth" coupled to the earth and do not cause the dissipation of energy from the electric charge carriers from the earth due to the resonance effect.

Description

“RESONATOR SYSTEMS CAPTURING ELECTRIC CHARGES FROM THE EARTH” and “USE OF A METHOD TO TRANSFER ELECTRIC CHARGES FROM THE EARTH THROUGH ELECTRIC POWER CIRCUITS”

Technical Field

[001] The present patent application refers to the improvement of the circuits of the objects of patent application BR 10 2021 019838-9. The present application includes in electrical circuits of alternating power the use of electrical circuits carrying electrical voltage coupled directly to earth through the use of the electrical circuits of the objects of the present patent application, it also reveals some alternative variants of the improved circuits that contribute strongly to the supply of energy, “green energy”, using the resonance effect at the fundamental frequency to cause the electrification and polarization of the earth's electrical charges to transfer energy from the earth through electrical power circuits.

[002] Said request also refers to the “USE OF METHOD FOR TRANSFERRING ELECTRICAL CHARGES FROM THE EARTH THROUGH ELECTRICAL POWER CIRCUITS” which includes in electrical alternating power transmission and/or distribution circuits the use of grounding structure/s /s that are individually connected to each of the electrical voltage carrying lines of each of the R, S and/or T phases, making these grounding structures work permanently energized, uninterruptedly transferring electrical charges from the earth through the circuits of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” through alternating power electrical circuits.

Background of the Technique

[003] As the charge is conserved, it can only be transferred between bodies, so, to achieve this, we use electrification processes. Electrization processes are phenomena in which electrons are transferred from one body to another due to a difference in the amount of electrical charges existing between two or more bodies, or even through the acquisition of energy arising from friction between bodies. When two bodies (one electrified and the other initially neutral) come into contact, the neutral body has the same charge of the electrified, that is, electrification by contact. Induction electrification occurs when the electrification of an initially neutral body (induced) occurs by simply approaching a charged body (inductor), without there being contact between the bodies. The inductor

must be connected to the Earth or a larger body that can supply electrons to it or receive them from it in a flow caused by the presence of the inductor.

Electrical grounding
Electrical grounding fulfills an essential function in an electrical energy distribution system and must meet, among several requirements, those established regarding step and touch voltage values. Electrical grounding has three main functions: protecting the user of the equipment from atmospheric discharges, by enabling an alternative path to earth, from atmospheric discharges, “discharging” static charges accumulated in the casings of machines or equipment to the earth. Soil is considered a conductor through which an electric current can flow. The Earthing electrode is the conductor (or set of conductors) buried and electrically connected to the ground, and functional grounding is the name given to the earth connection of one of the live conductors of the system, in which this, which in general, is the neutral.

[004] There are no known methods or equipment, of practical use on an industrial scale, that cause the electrization and polarization of electrical charges through the use of resonance phenomena through the use of LC/RLC electrical circuits. However, with disclosures in the media, it can be thought that Nikola Tesla probably achieved the technical effect presented in this patent application.

State of the Art
[005] Despite the extensive knowledge of the state of the art about electromagnetism, resonance, electrostatics, electrization and polarization of electrical charges, an industrial method and/or a circuit of practical and scalable use on an industrial scale for use in circuits is not yet known. alternating power electrical devices that make use of the phenomenon of resonance resonating at the fundamental frequency of the primary source circuit to permanently cause the electrification and polarization of the earth's electrical charges which causes the transfer of electrical charges from the earth through the soil to alternating power electrical circuits.

[006] The present invention refers to the improvement introduced in the invention described in PI BR 10 2021 019838-9, part of the text of which is reproduced below: “Descriptive Report of the Invention Patent for “METHOD OF USE, AND, ELECTRIC CHARGES RESONATOR COMPENSATOR SYSTEMS”

Technical Field
[007] The present invention refers to a new application for the use of resonant circuits, described here as, for use in simultaneously obtaining reverse active energy and reverse reactive energy by the alternating side of the electrical network. These “ELECTRIC CHARGE RESONATOR COMPENSATOR SYSTEMS” are powered by a primary source of external electrical energy and consume from this primary source a tiny demand for direct active power. These systems, objects of the present invention, increase the efficiency of the electrical network by exceptionally allowing the perfect use of the phenomenon of

resonance in an alternating electrical network, now in an original way it allows to supply reverse active energy and reverse reactive energy, simultaneously. The present invention also refers to a “METHOD OF USE” that increases the energy efficiency of the electrical circuit.

Background of the Technique

[008] There are no known static electromagnetic equipment qualified as LC and/or RLC resonant circuits - closed circuit systems that are powered by a primary source of electrical energy - that are capable of causing reverse active energy transfer through vibrations that generate oscillations sinusoidals in permanent regime maintaining amplitude (whether of charge, current and/or voltage) permanently achieving the resonance effect capable of simultaneously supplying or transferring reverse active energy and reverse reactive energy to load receivers connected in any part of the electrical circuit extension . However, based on a drawing, released by the media, which shows a spacecraft that makes use of a capacitor bank as part of a circuit for obtaining and storing energy, it can be thought that, probably, Nikola Tesla has achieved the technical effect presented in this patent application.

State of the Art

Capacitor banks

[009] Capacitor banks, in electrical installations, aim to correct the system power factor by reducing the cosine (cos cp) of the angle. To resolve the issue of power factor, capacitor banks are installed in parallel with these non-linear loads, which may undesirably cause series or parallel resonance.

Resonance

[0010] Resonance, a characteristic condition of any electrical circuit, occurs whenever the capacitive reactance equals the inductive reactance at a given frequency, known as resonance frequency.

[001 1] Series resonance occurs when the capacitive reactance is equal to the inductive reactance, the path through which the current circulates has low impedance, so for that resonance frequency we will have high current, this is not beneficial. Series resonance usually occurs when the association of a transformer with a bank of capacitors forms a circuit tuned to the frequency generated by the system's harmonic sources, constituting a low impedance path for the flow of a given harmonic frequency current, even if the voltage of the harmonic frequency is small, a high current can occur, causing a current surge at the harmonic frequency, this can cause serious problems for the network and/or capacitor banks. When the dealership network comes into resonance with the capacitor bank, creating a low impedance path at the resonance frequency of the harmonic current that produces a current surge at that harmony frequency that can damage the capacitor bank.

[0012] Parallel resonance occurs when the equivalent inductance of the utility supply system and a capacitor bank of the consumer installation resonate at a frequency close to that generated by a harmonic source, constituting a high impedance path for the flow of a

given harmonic current, even a small harmonic current can give rise to a significant overvoltage at the resonant frequency.

[0013] The effect of resonance in alternating electrical networks is something undesirable when they damage the capacitor bank and other equipment in the resonance path. Scholars from the University of São Paulo presented content related to the topic of this patent application.

[0014] Considering a circuit with a pure inductor and a pure capacitor connected in series, where the capacitor is charged at time t=0. As the capacitor is initially at maximum charge, the current will be equal to zero; As the capacitor discharges, the current increases, until the capacitor is completely discharged and the current reaches its maximum value. When the charge is maximum and the current is equal to zero, all the energy will be stored in the electric field of the capacitor. When the charge is zero and the current is maximum, all energy will be stored in the inductor's magnetic field. As the circuit is ideal (imaginary), that is, ideal capacitance and inductor and zero resistance, the charge and current will oscillate indefinitely, and, as there is no resistance, there is no energy dissipation. Therefore, it is a conservative system: the energy it initially contained, associated with the capacitor charge, always remains in the system. The algebraic analysis of this behavior is in class 3 of the class notes for the FAP-212 course, as well as in the other references suggested at the beginning of this booklet.

[0015] It is important to remember here that, when any system (mechanical, electrical, acoustic, nuclear, etc.) capable of oscillating, is excited (removed from its equilibrium condition) this system will oscillate alone in one (it can also be more than a) particular frequency which is called the natural frequency of the system.

[0016] When introducing an electrical resistance into the ideal LC circuit, with each oscillation, part of the energy is lost in the resistance, in such a way that the system (charge, current and voltages) continues to oscillate, but the amplitudes, or values of peak, both the load and the current, or voltages, decrease, until they cancel each other out. Such a system is said to be damped. When there is damping, the frequency at which the system will oscillate until it stops is lower than its natural oscillation frequency. How much smaller will basically depend on the intensity of the damping.

[0017] A way to maintain oscillations in a system Damped is to provide energy periodically through a generator, which will perform positive work on the system. The application of an alternating external voltage will produce a forced oscillation in this system. The important thing is that the system will oscillate (load, current and voltages) at the same frequency with which the generator supplies energy, but, in general, with a small amplitude. If the oscillation amplitude (whether of the charge, qp, current, ip, capacitor voltage, VCP, or inductor voltage, VLP, where the index P means “peak”) is small, this means that little energy is being transferred from the generator to the RLC circuit.

[0018] In fact, the oscillations in a forced RLC system (the same goes for any system that oscillates) will be of small amplitude whenever the generator's oscillation frequency is different from the natural frequency of the system. If the generator allows continuous frequency variation, it can be noted that as the generator frequency approaches the natural frequency of the system, the amplitude of oscillation (whether of load, qp, current, ip, VLP OR VCP) increases dramatically. When the generator frequency is identical to the natural frequency of the system, the oscillation amplitude reaches its maximum value and this condition is known as resonance. And the natural frequency of the system is also known as the resonant frequency. The resonance condition is the condition in which energy is most efficiently transferred from the generator to the system or to the RLC circuit, in this case. This means that, at resonance, most of the energy available in each cycle will be stored either in the capacitor's electric field (as charge), or in the inductor's magnetic field (as current), little or no energy will be returned to the generator. , although a part is always lost in resistance. The lower the resistance of the circuit, the greater the amplitude of oscillation (whether of the charge, qp, or of the current, ip, or of VLP OR of VCP) at resonance, in addition, the faster this amplitude increases or falls when the generator frequency around the resonance frequency.

[0019] Resonance is of fundamental importance in understanding a large number of mechanical, electromagnetic, acoustic, atomic, nuclear and other phenomena. ”

[0020] USP. Series RLC circuit. Available at: httDs://edisciplinas. usp.br/pluciinfile.DhD/239561/mod resource/content/1 /RLC c ao.pdf. Accessed on March 28th. 2021

[0021] Despite the extensive knowledge of the prior art on resonant circuits, the constructive configuration of an effective resonant circuit for use on an industrial scale capable of achieving the technical effect proposed in the aforementioned patent application is not yet known.

[0022] Said patent application reveals how to transform a theoretically ideal (imaginary) resonant circuit into a practical, efficient and scalable real circuit, which increases the efficiency of the alternating electrical network by compensating reverse reactive energy with the original supply of active energy reverse simultaneously.

Objectives of the Invention

[0023] The objective of the present invention is achieved with the use of resonant circuits now configured as “ELECTRIC CHARGE RESONATOR COMPENSATOR SYSTEMS”, systems that are powered by a primary voltage source and use the energy from the primary source to cause forced oscillation, maintaining vibrations and oscillations in a permanent regime with amplitude, constantly reaching the resonance condition. Said objects of the present invention are simply kept connected, preferably connected to the primary and/or secondary circuit, to achieve the resonance effect.

[0024] The objects of the present invention are achieved with the configuration of “ELECTRIC CHARGE RESONATOR COMPENSATOR SYSTEMS” and include in the configurations of said objects of the invention at least one reactor (2) and/or at least one inductor (3), associated with at least one resistor (4), associated with at least one filtering capacitor (5), associated with at least one capacitor set or capacitor bank (7), with each capacitor bank necessarily configured through the association of multiple capacitors , with each capacitor preferably having a capacitance of 0.5 pF to 5 pF, each capacitor bank (7) of the association being configured within the capacitance range of 0.5 pFa 300 pF, preferably within the capacitance range of 20 at 270 microfarads.

In the internal circuit of the aforementioned systems, preferably between the inductor (3) and the capacitor bank (7), there may be sockets for supplying inductive loads that are made up of active components. (partial or total decoupling of the resonance effect may occur). “ELECTRIC LOAD RESONATOR COMPENSATOR SYSTEMS” may also be without the use of resistor device/s (4) and filter capacitor device/s (5) in their internal circuit. The objects of the present invention can be housed in enclosures according to the desired degree of protection. The objects of the present invention may be single-phase, two-phase and/or three-phase, low, medium, high or ultra-high power.

The objects of the present invention can be configured with the inclusion of protection devices and power controls, including measuring instruments, including suitable software to monitor the use of the method through the behavior of electrical powers present in the electrical network. These systems, objects of the present invention, can be programmed and/or configured as semi-automatic or automatic fixed power and/or programmable systems.

[0025] As a new and advantageous technical effect, “ELECTRIC CHARGE RESONATOR COMPENSATOR SYSTEMS” use energy from the primary source to cause forced oscillation, maintaining vibrations and oscillations in a permanent regime with amplitude, constantly reaching the resonance condition, with transfer in permanent and simultaneous reverse active power and reverse reactive power for the circuit. Still as a new and advantageous technical effect, the direct active power consumed by the load/s connected between the inductor (3) and the capacitor bank (7) returns as reverse active power to supply the load/ connected to the external electrical circuit.

[0026] Another objective of the present invention is achieved with the use of a “METHOD OF USE” that increases the efficiency of electrical networks by simultaneously providing reactive energy and especially reverse active energy, with minimal consumption of direct active electrical energy from the primary source supplying electrical energy, through the use of “ELECTRICAL LOAD RESONATOR COMPENSATOR SYSTEMS” that are installed and kept connected, for a determined or indefinite period of time, as if they were loads installed in strategic locations of the electrical network of low, medium, high or ultra voltage, preferably at the end of the primary distribution circuit lines and/or secondary

distribution lines, or Furthermore, installed at the end of power transmission lines in locations, preferably far from power generation sources.

[0027] It is advantageous to compensate reactive energy using the objects of the present invention because the system simultaneously provides reverse active power and reverse reactive power in resonance, with zero resistance, causing an increase in the efficiency of the electrical network.

[0028] Advantageously, the reverse active and reverse reactive electrical quantities interact in a directly proportional way with the impedance. Increasing the impedance in the electrical network increases the negative power factor and increases the supply of reverse active power to the electrical circuit.

[0029] Advantageously, the use of the resonance effect in alternating voltage and current electrical networks can now be safely carried out.

[0030] Advantageously, the objects of the present invention also achieve high powers - through a scalable configuration - with the increase of multiple associations of “ELECTRIC CHARGE RESONATOR COMPENSATOR SYSTEMS”.

Objectives of the Invention

[0031] The objective of the present invention is to achieve the transfer of electrical charges from the earth by injecting an alternating flow of voltage and sinusoidal resonant current that cross and close the electrical circuit through the ground, causing electromagnetic interactions between the carriers of electrical charges that cause the transfer of energy at the fundamental frequency through the use of the circuits of the objects of the present invention and its method of transferring electrical charges from the earth that use the circuits of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” to provide the transfer of energy through the charges electrical charges of the earth through their charge carriers using the action and effect of resonance to resonate at the fundamental frequency providing the range of electrization and polarization of the electrical charges of the earth causing the permanent transfer of electrical charges from the earth through the earth to the electrical circuit of alternating power through the circuit lines of the R, S and/or T phases, this fact occurs without the dissipation of energy from the electrical charge carriers of the earth due to the resonance effect that overcomes the strong opposition to the injection of passage of electric current in the ground, currents that close the physically open electrical circuit between R, S and/or T through the ground.

These “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” are used to gain power, always connected to the electrical grid through R, S and/or T phase lines that are independently grounded separately for each of their R phase lines, S and/o T through the circuits of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” which are used to electrify the Earth's soil, always powered between an electrical voltage source and the ground, aiming at the transfer of electrical charges coming from the ground for

electrical alternating power circuits for the transmission and/or distribution of electrical energy. In this new patent application proposal, the ground circuit is configured as an independent type of grounding so that the ground is permanently electrified with the aim of transferring electrical charges from the ground to the electrical power circuit that receives the charge transfers in an instantaneous, permanent and constant manner. through their charge carriers to supply the electrical charge receivers.

[0032] The present invention is characterized by including in alternating power electrical circuits, that is, generation, transmission and/or distribution, the use of independent and energized grounding structures as a means of accessing the source of transferring electrical charges from the earth, establishing access to this energy source and making these grounding structures work permanently energized, uninterruptedly transferring electrical charges from the earth through the circuits of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” connected with the alternating power electrical circuits .

[0033] Through an extremely symbolic analogy, considering only the main elements used in a photovoltaic energy generation system and the elements used in the technology offered by the objects of the present invention, the profile of said technology is demonstrated in Table n and 1.

Table n and 1

ANALOGIA			
Tecnologia	Fonte de energia	Equipamento	Circuito: Exemplo não limitativo
FOTOVOLTÁICA	SOL	PLACA SOLAR INVERSOR	CC/AC
RESSONANTE	TERRA	ATERRAMENTO CAPACITOR INDUTOR	AC/AC

The objects of the invention

[0034] “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” are LC/RLC circuits that are, alternatively, previously configured to resonate naturally at the fundamental frequency and - alternatively can be designed through the addition of suitable devices that make it difficult to pass of energy to cause resonance at negative frequencies of up to at least 70 (-) GHz and/or resonate at a positive resonance frequency of up to at least 7.8 GHz - comprise at least one electric and/or magnetic field generating device or equivalent, provided with at least one ferromagnetic core in the form of a reactor, stator, transformer or the combination, association between them, which are configured using at least one primary coil and/or at least one secondary coil and/or set of coils that use and associate at least one coil (1) associated with at least one capacitor or at least one set of capacitors or at least one bank of capacitors (2), each capacitor or set of capacitors or bank of

capacitors (2) being configured through the preferred association with the use of capacitors of 3 uF, 6 uF, 9 uF and 18 uF associating within the capacitance range of 4.5 pF to 20 pF microfarads, extremely preferred with the use of capacitance between 9 uF and 20 uF, with the best capacitance of 18.45 uF or close to this value in capacitance at any voltage, making the object of this patent characterized by obligatorily including couplings that interconnect at least one of the lines carrying electrical voltage from phases R, S and/or T (5.1, 5.2 and/or 5.3) through at least one independent energized grounding circuit (6.1, 6.2 and/or 6.3) that are associated with at least one grounding structure (6.1, 6.2 and/or 6.3) or with at least one independent and energized metal rod assembly or coupled with at least a group of independent and energized earthing mesh or coupled with at least one independent and energized earthing system and/or at least one equivalent earth circuit (6.1, 6.2 and/or 6.3) and are provided with at least one connection to at least a transmission line and/or power distribution line (1 1.1, 11.2 and 11.3) and coupled to the energized independent grounding system (6.1, 6.2 and 6.3); and by including in only some variants of the circuits the preferred, but not limiting, alternative use of the neutral circuit (4) for the preferred, but not limiting, supply of at least one coil or set of coils (1); and by using independent grounding structures that are coupled to at least one of the phases of the R, S, T lines of electrical circuits that preferably use in their construction configurations the application of dielectric materials for electrical and life protection purposes, which are used above the ground surface and/or below the ground surface, according to the needs of the projects.

[0035] Said objects of the present invention “RESONATOR SYSTEMS CAPTURING ELECTRIC CHARGES FROM THE EARTH” can be housed in casings according to the desired degree of protection. The objects of the present invention may be single-phase, two-phase and/or three-phase, low, medium, high or ultra-high power. The objects of the present invention can be configured with the inclusion of protection devices and power controls, including measuring instruments, including suitable software to monitor the use of the systems and/or the use of the method through the behavior of the power flow. of the circuit. These objects of the present invention can be programmed and/or configured as uncontrolled or controlled automated, programmable, semi-automatic and/or automatic power systems.

Prototype

[0036] An extremely non-limiting example, but to be used for industrial application, indicated for use by electrical energy utilities, described here for assembly in an electrical medium distribution network voltage, configured as “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” for 13.8 kV three-phase distribution network using a 12 kVA three-phase transformer with 13.8 kV primary and 1.320/380/220VAC secondary connection group Dyn1 and/or Yyz1, on the secondary output 1320V F/F output for connecting the association of capacitors associated in star - optionally with floating common point - association of 3 x 18.50 pF 1320VAC capacitors which are also connected to earth by conductors - electrical voltage carriers - connected with the independent

grounds energized through the circuit of the respective 1320VAC voltage carrier lines between the R, S and T phase lines.

[0037] In another, non-limiting example, to configure a circuit “RESONATOR SYSTEMS CAPTURING ELECTRIC CHARGES FROM THE EARTH” the circuit of an AC induction electric motor is adapted applying the same concept of the aforementioned patent application to configure an electric motor induction which is characterized by including a change in the way of closing the internal circuit at the end of the winding of at least one coil or sets of coils, of the stator or rotor, of each of the phases A, B and/or C of the circuit. motor that are not closed at the same common point, which in this exemplified circuit, the end of the coil windings are connected and exit through other collector rings and brushes installed on the other side of the electric motor (on the other side of the shaft) so that these tips at the end of the coil windings are interconnected through other motor output connection terminals that are intended exclusively for connecting the association of capacitors that are also connected to the same output intended for connecting and interconnecting the motor to earth through independent earthing and energized to close the circuit through earth.

[0038] A simpler, extremely non-limiting and simplified example was chosen to demonstrate non-limiting results achieved with the configuration and construction of one of the variants chosen among the objects of the present invention fed by a three-phase 45 kVA AT 13.8kV BT transformer 380V F/F and 220VAC F/N, connection group Dyn1 (not represented in the diagram), makes use of the three-phase star configuration 380VAC between phases, 220VAC between phase and neutral, which shows one of the circuits alternatives of the “EARTH ELECTRICAL CHARGES CAPTURE RESONATOR SYSTEMS”, as per Fig. n and 1 of the diagram showing the three-phase BT 380VAC distribution circuit of the primary source (13) R, S, T, N and T protective earth (8); shows the simple non-limiting alternative circuit chosen for the configuration of the prototype (10) exemplified in Fig. n and 1, which reveals a three-phase 220/380VAC 3F + N + 3 (three) independent grounding circuit energized at (6.1, 6.2 and 6.3) separated and isolated only by soil impedance for a minimum distance of 3 meters; shows the circuit phase lines R (5.1), S (5.2), T (5.3), N (4.1, 4.2 and 4.3); shows the groundings (6.1), (6.2) and (6.3); shows the series associations of the sets of 750 Watt 220Vac coils at (1.1, 1.2 and 1.3) in each line the R, S, T phase of the circuit - using coils wound in iron configured with a format two-pole stator - which is interconnected and coupled by the common circuit of neutral conductors (4.1, 4.2 and 4.3) which are coupled with 18.50 pF microfarad capacitors, 450VAC associated in Y star (2.1, 2.2 and 2.3) which they are also coupled with the lines of each of the phases of the R, S, T lines (5.1, 5.2, and 5.3) which are also interconnected through the conductors (7.1, 7.2 and 7.3) connecting to the independent and energized grounding structures (6.1, 6.2 and 6.3). These grounding structures are interconnected to the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” which are interconnected to the primary voltage source through the circuits.

[0039] THE “USE OF METHOD FOR TRANSFERRING ELECTRICAL CHARGES FROM THE EARTH THROUGH ELECTRICAL POWER CIRCUITS” for special use of the grounding circuit (6.1, 6.2 and/or 6.3) which is characterized by including in the electrical power circuit the use permanently energized grounding device coupled with at least one of the electrical voltage carrying lines of the R, S, and/or T phases (5.1, 5.2 and/or 5.3) of the electrical power circuits that are configured as a physically open circuit through the earth between the electrical voltage carrier lines phases R, S and/or T that are grounded independently so that the electrical circuit is closed through the earth only through the flow of voltage and resonant current that cross the open circuit interacting with the carriers of electrical charges from the earth; being able to make preferred alternative use in one of its construction configurations the application of dielectric materials for electrical and life protection purposes can be used above the ground surface and/or below the ground surface in underground areas according to the needs of the projects and/or, alternatively, for vertical divisions of at least one grounding structure group R, S, T (6.1, 6.2 and/or 6.3), or at least one independent and energized metal rod, or coupled with at least one independent grounding mesh and energized, or coupled with at least one independent, energized grounding system and/or at least one equivalent ground circuit (6.1, 6.2 and/or 6.3). These grounding structures can be built in locations close to or far from the electrical transmission and/or distribution networks of electrical energy as long as they are coupled with at least one of the circuits of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” which are characterized by making association and coupling with at least one grounding structure (6.1, 6.2 and/or 6.3) or with at least one set of independent and energized metal rods or coupled with at least one group of independent and energized grounding mesh or coupled with at least an independent and energized earthing system or with at least one equivalent energized earth circuit (6.1, 6.2 and/or 6.3) and are provided with at least one connection to at least one transmission line and/or power distribution line (1 1.1, 11.2 and 11.3) and coupled in (6.1, 6.2 and 6.3) to supply electrical charges to power electrical charge receivers.

[0040] Configured with the inclusion of protection devices, said grounding structures or grounding systems (6.1, 6.2 and 6.3) alternatively include in their configurations the use of control and power management systems, mechanisms and/or sectioning devices drive and protection mechanisms, manual and/or automated operation and control mechanisms and/or devices, monitoring systems for local and/or remote control circuits.
[0041] The construction of energized grounding structures must make use of soils protected against flooding, have life protection infrastructure and preferably with the use of customized materials, a non-limiting example would be the use of metal rods applied in deep ways, preferably fixed and protected by inspection boxes made of insulating materials provided with safety seals and signs; Furthermore, they must preferably use conductors insulated on the surface and/or alternatively partially insulated, with the conductors preferably marked with an indication (ground symbol “DANGER electrical voltage”), preferably with the use of vibrant and eye-catching colors associated with the color green, with all The areas of the grounding plant isolated and marked and,

alternatively with appropriate protections, may be built in urban and/or rural areas, preferably on higher ground and/or located in basements free from flooding.
[0042] The “USE OF METHOD FOR TRANSFERRING ELECTRICAL CHARGES FROM THE EARTH THROUGH ELECTRICAL POWER CIRCUITS” uses the circuits of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” to interconnect the electrical network lines from the voltage sources to the ground through of independent live active energized earthings, which is characterized by operating permanently energized, preferably uninterruptedly, and by instantly achieving, as a new and advantageous technical effect, the electrification and transfer of polarized electrical charges from the earth.

[0043] As a new technical effect, the circuit provides the transfer of energy through the earth's electrical charges through their charge carriers using the effect of resonance action to resonate at the fundamental frequency providing the range of electrization and polarization of electrical charges of the earth without the occurrence of dissipation of energy transferred through the earth's electrical charge carriers. Even encountering strong opposition to the injection of the passage of electrical current into the ground, the resonant effect closes the physically open electrical circuit between R, S and/or T through the ground and causes the permanent transfer of electrical charges from the ground through the ground to the electrical circuit of alternating power through the circuit lines of the R, S and/or T phases.

[0044] The electrical load receiver circuits can also alternatively be connected and fed directly through the ground in the region of the energized grounding area and, as a new technical effect, the energy transferred to the electrical load receivers is supplied by the DDP potential difference achieved between different points on the ground within the grounding areas.

[0045] Still as a new technical effect, the electrical receiver circuits for resistive loads (12) can also be connected and powered directly through the ground without connections (6.1, 6.2 and 6.3) and, as a new technical effect when the electrical receivers of resistive loads (12) are powered by the potential difference caused and reached in the earth's soil, a closed flow of current is established between the earth and the electrical load receivers (12) (connected to electrodes set in the earth and without physical connection for contact with a metallic conductor with the circuit of lines R, S and/or T) which are supplied by electrical charges from the earth, this type of connection does not direct electrical current to the circuit of the primary source of alternating power when the electrical charge receivers are connected and powered directly through the DDP caused in the earth's soil.
[0046] Advantageously, the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” use resonance to cause the achievement of electrization and polarization of the earth's electrical charges that are transferred instantly and permanently to the alternating power electrical circuits.

[0047] Advantageously, the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” resonates at the fundamental frequency, provides a sinusoidal signal, is free from harmonic distortions above THDU 3% in voltage and free from harmonic distortions above THDI 5% in current.

[0048] Advantageously, the use of “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” circuits in electrical networks provides the electrical power circuit with an energy source that delivers extreme energy efficiency.

[0049] Advantageously, optionally the resistive load electrical receiver circuits (12) can also be connected and powered directly through the ground without connections (6.1, 6.2 and 6.3) when the resistive load electrical receivers (12) are powered by the potential difference caused and reached in the earth's soil, a closed flow of current is established between the earth and the electrical load receivers (12) (connected to electrodes stuck in the earth and without physical connection for contact with metallic conductor with the circuit of lines R, S and/or T) which are supplied by electrical charges from the earth, this type of connection does not direct electrical current to the circuit of the primary source of alternating power when the electrical charge receivers are connected and fed directly through the DDP caused in the earth's soil.

Brief description of the drawings

[0050] The aforementioned objects of the patent application will be described below with the aid of drawings, these drawings being not absolutely limiting, other details and advantages of the present invention not reported here can be observed.

[0051] Figure n ^{and} 1 shows a non-limiting representation of a multi-wire electrical circuit.

Description of Drawings and Images

[0052] Figure n ^{and} 1 shows an alternative circuit, in this case the same circuit used as an example in the aforementioned patent application and used to assemble the prototype of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” which is connected with three meshes. independent and energized earthing and a protective earth.

[0053] Figure n ^{and} 1 shows the direct energy input point supplied by the primary source - powered by a 45 kVA three-phase transformer - AT 13.8kV - BT 380V F/F and 220VAC F/N connection group Dyn1, shows the circuit - (13) and output of electrical charges from the earth (13, 1 1.1 , 1 1 .2 and 1 1 .3) of the objects of the present invention.

[0054] Figure n ^{and} 1 shows a set of coils (1.1, 1.2 and 1.3), more specifically a set of coils wound on a two-pole stator type iron and a series connection between the two coils and an association of capacitors (2.1, 2.2 and 2.3).

[0055] Figure n ^{and} 1 shows the couplings of the independent ground circuits (3.1, 3.2, and 3.3) connected with conductor circuits (7.1, 7.2 and

7.3) which are connected to the grounds (6.1, 6.2 and 6.3) that belong to the circuit of the respective R, S and T phase lines (5.1, 5.2 and 5.3).

[0056] Figure n and 1 shows a set of capacitors associated in parallel (2.1, 2.2 and 2.3).

[0057] Figure n and 1 shows the phase lines of the R, S and T circuit (5.1, 5.2 and 5.3), the neutral (4.1, 4.2 and 4.3) and the grounds (6.1, 6.2 and 6.3).

[0058] Figure n and 1 shows a power distribution and/or power transmission network (11.1, 11.2 and 11.3) derived from independent energized groundings (6.1, 6.2 and 6.3).

[0059] Figure n and 1 shows a power distribution and/or power transmission network (11.1, 11.2 and 11.3) derived from the independent energized grounds (6.1, 6.2 and 6.3) that feed the load receivers (12).

[0060] Figure n and 1 shows protective grounding (8).

[0061] Figure n and 1 shows the installation location and the electrical quantity multimeter (9.1) that measures in the four quadrants.

[0062] Figure n and 1 shows one of the alternative non-limiting variants of the circuits of the objects of the present invention (10).

[0063] Figure n and 1 shows the load receivers (12) coupled to the power distribution and/or power transmission network by (11.1, 11.2 and 11.3) through the circuit of the objects of the present invention.

[0064] Figure n and 1 shows the primary source of excitation (13).

[0065] Figure n and 2 shows the screen image of the measurements that present only results of the transfer of electrical charges from the earth caused by the impedance of the soil that transfers electrical charges from the earth to the charge receivers coupled to the primary source of excitation.

[0066] Figure n and 3 shows the image of the results accumulated during the 1 (one) hour period of a new measurement. In this period of 1 (one) hour of transferring electrical charges from the earth to the electrical power circuit, from the beginning of the test, the supply of two three-phase electrical resistances 4kW 380VAC was included, a fact that resulted in an increase of 8 kW to the results measurements, an event that provided a new technical effect by delivering a greater supply of reverse active energy to the electrical power circuit.

[0067] Figure n and 3 show in the “Energy” information field the EA+ results which correspond to direct active energy consumption of just 0.66 Wh accumulated in one hour

of operation. [0068] Figure n and 3 show in the “Energy” information field, the EA- results, which correspond to the supply of reverse active energy accumulated in 1 (one) hour of operation corresponding to 21.30 kWh.

[0069] Figure n and 3 show in the “Energy” information field, the ER+ results which correspond to the direct reactive energy accumulated in 1 (one) hour of operation corresponding to 1.50 kVArh.

[0070] Figure n and 3 shows in the “Energy” information field, the EA- results, which correspond to the supply of reverse active energy accumulated in 1 (one) hour of operation corresponding to - 21.30 kWh reverse flow.

[0071] Figure n and 3 shows in the “Energy” information field, the ER- results, which correspond to the reverse reactive energy accumulated in 1 (one) hour of operation corresponding to -627.9 VArh.

[0072] Figure n and 3 shows in the “Demand” information field, the DA results corresponding to 0.00W.

[0073] Figure n and 3 show in the “Demand” information field, the MDA results corresponding to 0.00W.

[0074] Figure n and 3 show in the “Demand” information field, the DS results corresponding to 16.94kVA.

[0075] Figure n and 3 show in the “Demand” information field, the MDS results corresponding to 20.80kVA.

[0076] Figure n and 4 shows the screen image of the minimum and maximum reading measurements.

[0077] Figure n and 5 shows the image of the four-quadrant meter configuration screen (9.1) of Figure n and 1.

[0078] Figure n and 6 shows the image of the measurement carried out with clamp meters at the input before the meter (9), in Figure n and 1.

[0079] Figure n and 7 shows the image of the measurement carried out with a clamp meter in phase R (5.1) at the input before the meter (9), in Figure n and 1.

[0080] Figure n and 8 shows the image of the measurement carried out with a clamp meter in phase S (5.2) at the input before the meter (9), in Figure n and 1.

[0081] Figure n and 9 shows the image of the measurement carried out with a clamp meter in phase T (5.3) at the input before the meter (9), in Figure n and 1. [0082] Figure n and 10 shows the image of the measurement carried out with clamp meters joining all neutral conductors (4.1, 4.2 and 4.3) in Figure n and 1.

[0083] Figure n and 11 shows the image of the measurement carried out with clamp meters on the grounding conductor (7.1) in Figure n and 1.

[0084] Figure n and 12 shows the image of the measurement carried out with clamp meters on the grounding conductor (7.2) in Figure n and 1.

[0085] Figure n and 13 shows the image of the measurement carried out with clamp meters on the grounding conductor (7.3) in Figure n and 1.

[0086] Figure n and 14 shows the image of the measurement carried out with a clamp meter joining all the conductors (7.1, 7.2, 7.3) of the independent energized grounds (6.1, 6.2 and 6.3), in Figure n and 1.

[0087] Figure n and 15 shows the image of the current measurement carried out with a clamp meter in one of the three phase lines of the supply conductor circuit (11.1, 11.2 and 11.3) of the 8 kW 380VAC resistive loads (12) shown in Figure n and 1.

[0088] Figure n and 16 shows an image of the soil resistivity measurement.
Use of the working prototype.

[0089] The aforementioned prototype (10), in Figure n and 1, was connected and powered through the primary source using a three-phase 220/380VAC 3F + N + T protection circuit, as shown in Fig. n and 13. In this prototype measurements were carried out using a Clamp Meter and a bidirectional Multimeter (9.1) that measures in the four quadrants, shown in the diagram in Figure n and 1;

[0090] Measurements with clamp meters were carried out due to the presence of current coming from the ground, the currents were measured in some regions: in the input circuit (5.1, 5.2, 5.3 and 4), in Figure n and 1 and Figures 6, 7, 8, 9 and 10; in the current-carrying circuit of each independent grounding (7.1, 7.2 and 7.3), in Figure n and 1 and Figures n and 1 1, 12 and 13; in the conductor circuit measuring the current of the three grounds together (7.1, 7.2 and 7.3), in Figure n and 1 and Figure n and 14; in the conductor circuit measuring the current of one of the supply phases of the electrical resistances totaling 8kW 380VAC (12), from Figure 1 and Figure n and 15 that were connected and fed directly through the transmission and/or distribution lines (1 1.1, 11.2 and 1 1.3), from Figure n and 1, by the three independent grounding (6.1, 6.2 and 6.3), in Figure n and 1, configured at 380VAC. Each independent grounding was formed by 2 rows with 4 1 /zx 2400mm copper rods and a row formed by 5 1 /zx 2400mm copper rods that were built using 16mm 19-wire bare copper conductors.

[0091] Preliminary measurement tables using clamp meters are presented below:
TABLE n and 2

CORRENTE DE ENTRADA				
Na entrada de alimentação do circuito				
CORRENTE INDIVIDUAL POR FASE				
FASE	R	S	T	Medição da corrente dos condutores de entrada juntos
Corrente	16.8A	23.4A	23.9A	3.8A
Figuras nº	2	2	2	Fig. nº 6
MULTIMEDIDOR				ALICATE AMPERÍMENTRO

TABLE n and 3

MEDIÇÃO NO TERRA				
Local	CONDUTOR ATERRAMENTOS Fig. nº 1 (7.1, 7.2 e 7.3)			
CORRENTE INDIVIDUAL POR FASE NO TERRA				
FASE	R-TE	S-TE	T-TE	medição da corrente dos condutores dos terra juntos
Corrente	16.8A	23.5A	24A	3.7A
Figura nº	2	2	2	Fig. nº 14
MULTIMEDIDOR				ALICATE AMPERÍMETRO

TABLE n and 4

MEDIÇÃO ACRESCENTANDO 8 KW - 380VCA CARGA RESISTIVA

CORRENTE INDIVIDUAL POR FASE				
Fig. nº 1 em (11.1, 11.2 e 11.3)				
FASE	R	S	T	RESISTENCIA ELÉTRICA TRIFÁSICA 8 KW 380VCA
Corrente	11.5A	11.5A	11.4A	
Figura nº	15	15	15	
ALICATE AMPERÍMETRO				
ENTRADA ENERGIA DIRETA / SAÍDA DE ENERGIA REVERSA				
NEUTRO – CORRENTE 1.5A Fig. nº 10				
FASE	R	S	T	medição da corrente dos condutores de entrada juntos
Corrente	29.6A	35.3A	35.3A	3.8A
Figura nº	7	8	9	Fig. nº 6
ALICATE AMPERÍMETRO				

[0092] The soil resistivity was measured using the Terrometer instrument, as shown in Figure n and 16.

[0093] Subsequently, the meter (9.1) was installed and measurement began in four quadrants with a bidirectional multimeter, for a period of 60 (sixty) minutes. For the measurements, the measuring instrument was used, represented in figure n and 1 (9.1) bidirectional multimeter that measures in four quadrants, which uses electrical magnitude transducer technology, measuring technology that converts electrical signals into power, which meets the following standards: IEC 61000-4-2, IEC 61000-4-6, IEC 61000-4-3, IEC 610 00-4-8, IEC 61000-4-4, IEC 61000-4-1 1 , IEC 61000 -4-5 and CISPR 1 1. Konect energy multimeter (9.1), with built-in CT, was installed on the 380V AC three-phase distribution network. The voltage signal between the phases was obtained by the meter configured in TL: T-48 - Three-phase Delta (3F) / TP: 1.0 / TI:15 / TC 1.0 / Seq. PF: F2, F1, F0, EXP.

[0094] Images of the measurement screens in four quadrants are presented in the drawings of said patent application in Figures n and 2 and 3.

Table 5 - Measurement results Fig. n and 3

Leitura – Energias e Demandas

Período 1 hora	
Energia	
EA+:	0,667 Wh
ER+:	1,507 kVArh
EA-:	-21,300 kWh
ER-:	627,901 VArh
Demanda	
DA:	0.00 kW
MDA:	0,00 W
DS:	16,942 kVA
MDS:	20,809 kVA

[0095] Additional information is shown in figures n and 2 and n and 3 with emphasis mainly on the quality of the energy transferred to the electrical power circuit, highlighting THD-U not exceeding 3% and THD-I not exceeding 4%, preferred resonant frequency 60Hz, negative power factor -0.999.

[0096] We can observe, substantiate and conclude that the 3.8A current highlighted in table n and 2 Fig., n and 6 is the resonant current flow that closes the electrical circuit through the earth between the three phases of the electrical power circuit alternate.
[0097] The current highlighted in table n and 2, Fig. n and 2 shows in phase R 16A, in phase S 23.4A and in phase T 23.9A, flows of electrical charges from the earth that are attracted and transferred to the electrical circuit of power without dissipation of energy from the electrical charge carriers of the earth, favored by the effect of resonance and electrification.

[0098] Although the present invention has been described with reference to the preferred embodiment and practical applications thereof, it is clear to those skilled in the art that there are a variety of types, formats, models and genres of materials, components and/or equipment that can be used in the construction and/or assembly of the circuits of the system object of the present invention, in addition to modifications and changes that can be made without departing from the scope of the present invention.

Claims

1. “USE OF METHOD FOR TRANSFERRING ELECTRICAL CHARGES FROM THE EARTH THROUGH ELECTRICAL POWER CIRCUITS” for special use of the grounding circuit (6.1, 6.2 and/or 6.3) which is characterized by including the use of grounds in the electrical power circuit permanently energized coupled with at least one of the electrical voltage

carrier lines of the R, S, and/or T phases (5.1, 5.2 and/or 5.3) of the electrical power circuits that are configured as a physically open circuit through the earth between the electrical voltage carrier lines phases R, S and/or T that are grounded independently so that the electrical circuit is closed through the earth only through the flow of voltage and resonant current that cross the open circuit interacting with the charge carriers earth's electricity.

2. “USE OF METHOD FOR TRANSFERRING ELECTRIC CHARGES FROM THE EARTH THROUGH ELECTRICAL POWER CIRCUITS” according to any of claims 1, 3, 4, 5, 6, 7, 8, 9, 10 and 11 is characterized by including in alternating power electrical circuits, that is, generation, transmission and/or distribution, the use of independent and energized grounding structures as a means of accessing the source of transfer of electrical charges from the earth, establishing access to this source of energy and making these grounding structures work permanently energized, uninterruptedly transferring electrical charges from the earth through the circuits of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” connected with alternating power electrical circuits.

3. “USE OF METHOD FOR TRANSFERRING ELECTRIC CHARGES FROM THE EARTH THROUGH ELECTRICAL POWER CIRCUITS” according to any of claims 1, 2, 4, 5, 6, 7, 8, 9, 10 and 11 characterized by using the circuits of the “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” to interconnect the lines of the electrical networks from the voltage sources to the earth through independent live active energized earthings, which is characterized by operating permanently energized, preferably in a uninterrupted and by instantly achieving, as a new and advantageous technical effect, electrification and the transfer of polarized electrical charges from the earth.

4. “CHARGE CAPTURE RESONATOR SYSTEMS

EARTH ELECTRICS” LC/RLC circuits that are, alternatively, previously configured to resonate naturally at the fundamental frequency and - alternatively can be designed through the addition of suitable devices that hinder the passage of energy to cause resonance at negative frequencies of up to at least 70 (-) GHz and/or resonate at a positive resonance frequency of at least 7.8 GHz - comprise at least one electric and/or magnetic field generating device or equivalent, provided with at least one ferromagnetic core in the form of a reactor , stator, transformer or the combination, association between them, which are configured using at least one primary coil and/or at least one secondary coil and/or set of coils that use and associate at least one coil (1) associated with at least one capacitor or at least one set of capacitors or at least one bank of capacitors (2), each capacitor or set of capacitors or bank of capacitors (2) being configured through the preferred association using 3 uF capacitors , 6 uF, 9 uF and 18 uF associating within the capacitance range of 4.5 pF to 20 pF microfarads, extremely preferred with the use of capacitance between 9 uF and 20 pF, with a capacitance of 18.45 pF or close to this value in capacitance in any voltage, making the object of this patent characterized by obligatorily including couplings that interconnect at least one of the electrical voltage-carrying lines of

phases R, S and/or T (5.1, 5.2 and/or 5.3) through at least an independent energized grounding circuit (6.1, 6.2 and/or 6.3) that are associated with at least one grounding structure (6.1, 6.2 and/or 6.3) or with at least one independent and energized metal rod assembly or coupled with at least at least one group of independent and energized earthing mesh or coupled with at least one independent and energized earthing system and/or at least one equivalent earth circuit (6.1, 6.2 and/or 6.3) and are provided with at least one connection with at least least one transmission line and/or power distribution line (1 1.1, 11.2 and 11.3) and coupled to the energized independent grounding system (6.1, 6.2 and 6.3).

5. “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” according to any one of claims 1, 2, 3, 4, 6, 7, 8, 9,10 and 11 characterized by including in only some variants of the circuits the use preferred, but not limiting, alternative of the neutral circuit (4) for supplying the preferred, but not limiting, at least one coil or set of coils (1).

6. “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” according to any one of claims 1, 2, 3, 4, 5, 7, 8, 9,10 and 11 characterized by comprising means for implementing the method as defined in the claim 1 .

7. “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” according to any one of claims 1, 2, 3, 4, 5, 6, 8, 9, 10 and 11 characterized by the new technical effect, the circuit provides the transfer of energy through the earth's electrical charges through their charge carriers using the effect of resonance action to resonate at the fundamental frequency providing the range of electrization and polarization of the earth's electrical charges without the occurrence of dissipation of energy transferred through the carriers of electrical charges from the earth.

8. “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” according to any one of claims 1, 2, 3, 4, 5, 6, 7, 9, 10 and 11 characterized by association and coupling with at least one structure grounding system (6.1, 6.2 and/or 6.3) or with at least one set of independent and energized metal rods or coupled with at least one group of independent and energized grounding mesh or coupled with at least one independent and energized grounding system or with at least one energized equivalent earth circuit (6.1, 6.2 and/or 6.3) and are provided with at least one connection with at least one transmission line and/or power distribution line (11.1, 11.2 and 11.3) and coupled in (6.1, 6.2 and 6.3) for supplying electrical charges to power electrical charge receivers.

9. “EARTH ELECTRIC CHARGES CAPTURE RESONATOR SYSTEMS” according to any one of claims 1, 2, 3, 4, 5, 6, 7, 8, 10 and 11 characterized by being of the single-phase, two-phase and/or three-phase, low, medium, high or ultra-high power.

10. “CHARGE CAPTURE RESONATOR SYSTEMS

ELECTRICAL EARTH” according to any one of claims 1, 2, 3, 4, 5, 6, 7, 8, 9 and 11 characterized in that they are configured with the inclusion of protection devices and power controls, including power instruments. measurements, including suitable software to monitor the use of systems and/or the use of the method through the behavior of the circuit's power flow. These objects of the present invention can be programmed and/or configured as uncontrolled or controlled automated, programmable, semi-automatic and/or automatic power systems.

11. “USE OF METHOD FOR TRANSFERRING ELECTRIC CHARGES FROM THE EARTH THROUGH ELECTRICAL POWER CIRCUITS” according to any of claims 1, 3, 4, 5, 6, 7, 8, 9 and 10 is characterized by the circuits of electrical receivers of resistive loads (12) can also be connected and powered directly through the ground without connections (6.1, 6.2 and 6.3), according to any of claims 1, 2, 3, 4, 5, 6, 7, 8 and 9 characterized by the new technical effect when the electrical resistive load receivers (12) are powered by the potential difference caused and reached in the earth's soil, a closed flow of current is established between the earth and the electrical load receivers (12) (connected to electrodes stuck in the ground and without physical connection for contact with a metallic conductor with the R, S and/or T line circuit) which are powered by electrical charges from the ground, this type of connection does not direct electrical current to the circuit of the primary source of alternating power when the electrical load receivers are connected and fed directly through the DDP caused in the earth's soil.