

Wireless Transmitting of Electricity Through Tesla Tower: Review Paper

Mr.DhikaleVaibhav¹, S.S. Bachhav², D.R. Bhise³

^{1, 2, 3} Dept of Mechanical Engineering

^{1, 2, 3} Mathoshri Engineering College And Research Center Nasik, Maharashtra

Abstract- Tesla tower is an invention of Nikola Tesla, for wireless electric energy transfer and free energy purpose. Tesla tower is working on the law of induction. Which act has a transformer, it uses the primary and secondary winding for a step up the voltage in output as input is low voltage. The Tesla tower is to transfer energy to transmitting tower to receiving tower, also generating electric energy by the law of electromagnetic induction.

Keywords- Tesla tower, the law of induction, voltage, electromagnetic induction,

I. INTRODUCTION

Nikola Tesla inventor of AC current for long rang electricity transitions to inventing Ac supply because of the before Ac supply all devices working on DC supply. And DC transition is to use, but does drawback is to transition of DC supply is not to transfer more than 1 km to the power generating station. Therefore Nikola Tesla working on Ac supply because AC is a long range to transfer without any loss it to be step up or step down by transformer has per requirement. Then invent ac current, but the AC supply is generating in power station and transfer long range help of copper wire. Drawback is high voltage transfer to wire which to harmful human body, and the working on ac current it to be dangerous. Then Nikola Tesla starts working on wireless transmission of electricity in 1891 experiment station at Colorado. Tesla not only transfers the electricity but also generating electricity. To transfer AC supply long rage by the help of air medium because air is good medium of electricity and also generating energy by help of earth magnetic field. The law of induction through the earth magnetic field of N and S pole is to be used for generating current. Place the current carrying conductor between magnetic field it produces electricity based on this concept generating electricity to the rotation of earth. [4]

After many years, in 2003 a company named Tesla Motors was incorporated by Martin Eberhard and Marc Tarpenning named after Nikola Tesla, then industry made the electric vehicle which works on to AC motors has piled by Nikola Teslain 1882. In February 2004 Elon Musk co-founder

of pay pal which to investing money in Tesla Company then chairmen of industry. In Tesla industry made the electric car which works on electric motor, cars is to use three phase induction motors for more power and carrying more load at high speeds. And also more electricity requires to the motor. Therefore use DC lithium batteries which are inverter though converting DC supply to three phase AC supply in Tesla cars. Number of model launches Tesla Company like Tesla Roster, Model S, and Model X

II. LITERATURE REVIEW

1891 Nikola Teslastart working on wireless energy transmission in the Colorado spring lab until he observe the new three experiments during wireless energy experiment. The first experiment is System of Electric Lighting which working on a single power supply to work at high frequency in June 23rd 1891 patent experiment. [1]

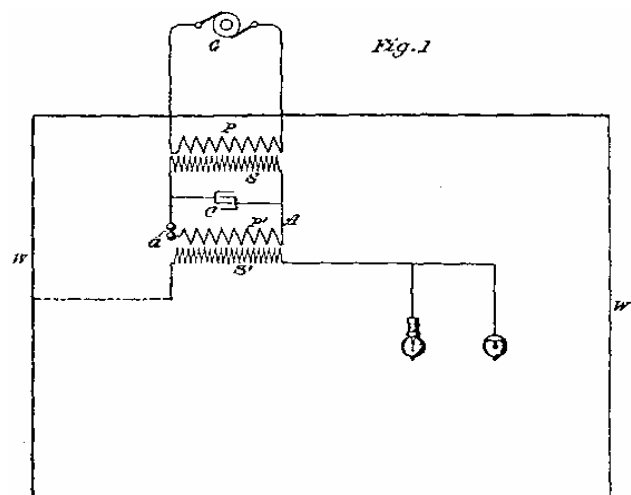


Fig 1. System of Electric Lighting

In November 2nd, 1897 electric transformer his second patent which to use in patent electric lighting system For generating high frequency current by help this electric transformer.

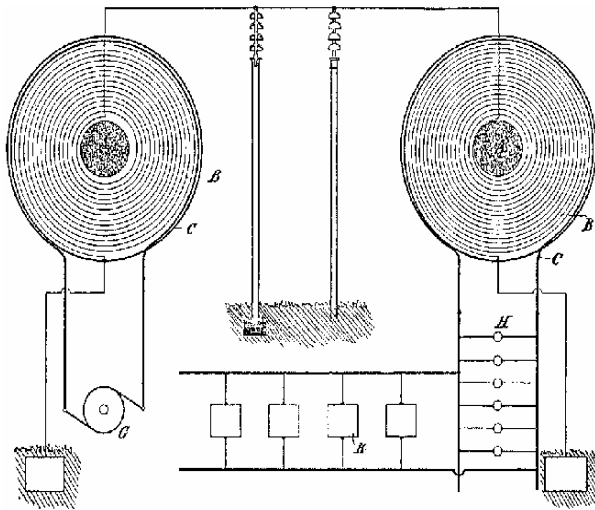


Fig 2. Electric Transformer

January 23rd, 1897 Nikola Tesla new patent is to discover which to hollow glass tube fill with; low pressure air and place between the electrical transformer then air act has good electricity conductor and due to this experiment Tesla is to prove to air is medium of electricity

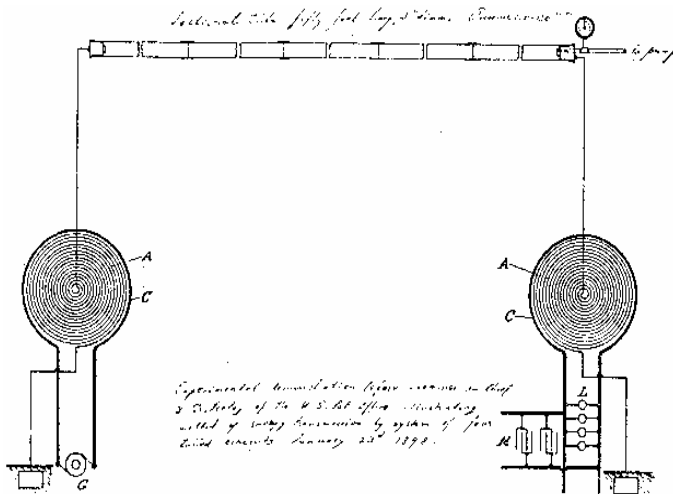


Fig 3. Energy Transmission through a Partly Evacuated Glass Tube

This Experiment Patent Discovers Before Tesla Tower.

In 1897 Tesla working on a wireless energy prototype in Colorado laboratory. To make the primary and secondary winding with a capacitor and inductance circuit and transformer which use for the power source electricity.[3]

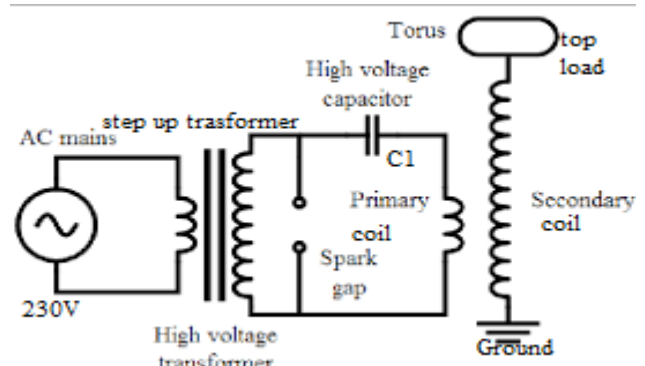


Fig 4. Tesla Tower Circuit Diagram

Construction of Tesla tower

Transformer, capacitor, primary and secondary winding, torus to top of coil to place for electricity distribution to use

Working of Tesla tower

Ac supply providing into a system which connecting to capacitor and the spark gap circuit. Primary winding connecting to circuit and secondary winding under the primary winding.

1. Transformer – single phase AC supply providing to circuit which to be low voltage AC supply. Therefore Step up transformer use to starting of circuit for high voltage required into the system.
2. Capacitor – When the high voltage supply flow through to circuit the due to spark gap charge the capacitor which is the use of the high voltage system. Capacitor charge stores because the potential difference crate into the plate.
3. Primary winding – primary winding having a minimum number of turns has compere to secondary wing because the increasing number of turns winding to crate maximum flux for creating a high voltage due to this primary winding having minimum number of turns. When the capacitor release charge to primary winding it to be induced voltage.
4. Secondary winding – secondary winding having maximum turns of winding compere to the primary winding because the maximum flux induced into winding for high voltage to transfer to the tower. Energy transfer from primary winding to the secondary winding to law of induction.

Discovery Of The Signal Transmitting By Radio Wave To Prove By Mathematically To Scantiest.

1. In 1864, James C. Maxwell proves thought mathematical model of radio wave existing.
2. In 1884, John H. Poynting to research on quantifying electromagnetic energy to play an important role of Poynting Vector
3. In 1888, Heinrich Hertz shows experiment thought the spark gap in radio wave transmitting by using Maxwell's theory. in the 19th century was start wireless transmission to radio wave to the transmission of energy to predictions and Evidence by Hertz.
4. In 1891 Nikola starting experiment wireless energy transmitting of energy in Colorado laboratory. To use the resonant circuit to transmit energy which to experiment with working and lighting to in the bulb glow through energy transition.

Tesla Tower Discover Modern Way

1. In 1964 research on microwaves transition development to energy of William C. Brown. To research on to transmit power the helicopter retina, which develop by brown to converting microwave energy to electrical energy. This produces electric energy is in DC from to solely think was transmitted microwave energy.
2. In 2007 demonstrating wireless energy transmitting to work in physics group which lead by prof. martin sagacious. Is to place the two 60 cm diameter coil to power 60 w bulb which having 40% efficiency and is to place in 2m distance to demonstrating in Massachusetts Institute of Technology. This experiment working on resonant induction law to power transmitting wireless. After this experiment to improve by technology to referred by WiTricity. Than to after to again working on MIT laborites

Actual Model Made By Nikola Tesla

In 1900s to build an actual model of the Tesla tower, which investing by j.p. Morgan which to interested in radio signal communication. To Tesla actually done radio signal transmitting in 1891, but Nikola was interesting at that time only on the free electricity wireless transition.

Then j. p. Morgan known to Tesla made the tower for wireless transition of electricity. Then he stops investing to Tesla tower

In 1903 after this, to investing stop, then destroying Tesla Tower. Tesla tower wireless energy transmission to use in transmitting and receiving tower is in place.

Waysof Transmitting Energy without Wire

1. Induction Through Transmission Of Energy

Law of induction is 'when the current carrying conductor moving between magnetic field its produce current without contact of a medium' like this transformer work in the primary and secondary winding transmitting energy due to induction. [7]

2. **Evanescent Wave though transitions of energy** Transfer energy to Transmitting coil and receiving coil without electromagnetic wave because the air act has a medium which to be absorb the electromagnetic radiation due to this electric device without disturbance energy transfer. Example internal reflection fluorescence microscope uses the evanescent wave produced by total internal reflection to excite fluorophores close to a surface.

3. Microwave Though Energy Transition

In Microwave energy transmitting to use transmitting Antenna and receiving retina use to transmitting data to radio wave. [8]

4. Laser Through Energy Transmission

Leaser is to use in pointing energy at a receiver in photovoltaic cell through energy converting to light. In leaser to converting electric energy to light energy and pointing a light as a beam to receiving a source of a photovoltaic cell.

III. APPLICATIONS OF TESLA TOWER

1. Spark gap radio transmitters Induction and dielectric heating (vacuum tube & spark gap types)

In radio history to spark gap is to generating to 1862 James, clerk Maxwell predict to electromagnetic wave transmitting in a vacuum.

In 1878 for transmitting radio wave use the spark gap at range of 500mtr. Which done by scantiest David E. Hughes. In 1888 to verify the Maxwell theory by Heinrich Hertz to scientifically. To place the spark gap to in transmitting coil and receiving coil spark gap to demonstrating place the same meter. He observes that spark generating in transmitting coil to converting into the electromagnetic wave the small spark gap to produce into receiving coil and achieving the signal this ultra-high frequency experiment perform

In 1893 Nikola Tesla working on radio system is called to loose coupler. Working on the radio frequency which operating in high frequency transition with low energy required for system to operating in any weather. Spark gap transmitter function is to produce radio frequency of in electromagnetic waves. in ready to use park gap and Tesla coil which to charge by capacitor to step up the frequency for long range transmitting to use Tesla coil into the radio.

2. Induction coils (differ only in the transformer core material being used).

In 1837 William sturgeon to inventing the induction coil which to one moving iron disc to rotating between to coil to then eddy current follow them .

In 1856 to inventing current converting transformer by three engineers Otto Bláthy, Miksa Dériand Károly Zipernowsky. Induction coil is one type of Tesla coil which is placed the primary and secondary coil which transfers the current by law of induction.

3. Medical X-ray devices (typically driven by an induction coil).

In 1895 William Conrad Roentgen to inventing x ray. Professor William Conrad Roentgen is a physicist at the University of Wurzburg in Germany. To conduct the experiment in a high voltage discharge into the black cardboard cover which to glow then he observe the led effect into screen observe the phenomena. In x-ray device having a high voltage at high frequencies which produce by induction coil.

4. Quack medical devices (violet-ray)

The function of Quack medical devices to follow the electromagnetic current in to the human body for measuring the resonance and steers on tissues of body in the violet ray though means the high voltage and low current passing in the human body

5. Ozone generators.

In 1840 van marum discord the ozone gas in berlin. After this experiment to numbers of trial is to conducting in to ozone gas generation to induction coil and ozone is toxic gas for human body is to be observing in this experiment.

6. Particle accelerators

In 1929 Ernest O. Lawrence to discover the particle accelerators in University of California. To hollow tube transmitting proton and change the direction for study to proton structure under the magnetic field.

7. Electrical stage shows & entertainment.

In electric equipment like guitar, which operating by amplifier and control module, though to the required current in which voltage step up and down to use Tesla coil into the system.

IV. MODERN WAY TO GENERATING ELECTRICITY

Morten development, renewable source In electric vehicles use in at a time, which work on basically to DC battery to inverter then a motor to work in electric car, but the drawback is to battery having specific limit which to discharge after use then electric source for providing to battery charging. Know days Nikola motors to launch Turk Nikola one which is an electric truck to working on regular cars, but different is to one option for providing the Nikola one truck to hydrogen use for charging battery in which two hydrogen gas and oxygen place between the dielectric fluid to the same reaction to hydrogen split his electron then oxygen to electron split to combine reaction to water is to generating and his electron spilt in dielectric fluid to electron splitting through electricity produce.

V. REASON WHY TESLA TOWER IS NOT BUILT IN AFTER100 YEARS ITS INVENTION

Tesla tower is to generate energy to use of earth magnetic field in law of induction to work. Due to this Tesla tower is to cut flux which to the magnetic field of the earth is to be reduced and earth temperature also increasing. Then UV ray directly contact to earth and end of life Tesla generating electricity is to high amount. Which not to be controlled and generating energy is to directly contact human body to harmful

VI. CONCLUSIONS

Tesla tower is to build then placing two tower in at electricity generating station .for one tower is to generating electric current and another tower is transmitting current due to this load of transmitting and receiving of electricity is to reduce in Tesla tower.

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BIOGRAPHIES

Mr. Dhikale Vaibhav B. Mechanical Engineer Mathoshri College Of Engineering Nasik, Maharashtra