**GENERATION OF ELECTRICITY USING SPARK PLUGS**

Electricity is not freely available in nature, so it must be transformed from one form of energy before we get the electricity. For utilities in the electric power industry, it is the stage prior to its delivery (transmission, distribution, etc.) to the end user or storage. Electricity is most often generated at a power plant by electromechanical generators, primarily driven by heat engines fueled by combustion or nuclear fission but also by other means such as the kinetic energy of a wind and water which is the main source of electricity to Ghanaians. Other energy sources include solar photovoltaics and geothermal power.

The photovoltaic effect is the transformation of light into electrical energy, as in solar cells. Photovoltaic panels convert sunlight directly to DC electricity. Although sunlight is free and abundant, solar power electricity is still usually more expensive to produce than the generation of electricity by means of spark plugs in conjunction with a permanent magnet. As we find alternative ways of generating electricity, the country would not then depend only on the Akosombo dam for electricity. This would also go a long way to minimize the power fluctuation and breakdown which has leads to the collapse of many industries.

AIM OF THE REPORT

Our goal as a group is to find some possible ways either by putting up a mechanism to generate electricity to the expense of the already existing ones. The prime purpose of this initiative is to ensure continuous supply of electrical power and at a cheaper cost.

HOW SPARK PLUGS HELPS TO GENERATE ELECTRICITY

Spark plug is a plug that sparks when high voltage is applied or introduced to it. There are a lot more going on behind the scenes to produce that high voltage spark. Some spark plugs generally do not generate electricity. Copper and iridium spark plugs are the only ones that can help to generate electricity. Copper spark plug generates electricity without the use of magnet whilst iridium spark plugs generate electricity by the means of magnet only. The central electrode acts as the negative part of the spark plug. The iridium spark plug has pulse circuit which helps to initiate the process when magnet is placed on it.

The magnet also produces a magnetic field and it is solely the area or region around a magnet where magnetic force is experienced. The presence of this magnetic field is determined by placing a compass near it. This is because magnetic field has no real existence and is purely imaginal. So, the magnet generates magnetic lines of force which form a closed loop from the north pole to the south pole. As such, there is a linkage between the coiled spark plug and the magnetic lines of force.

For we know from the principle of induction that, emf is induced in a conductor whenever there is a relative movement between the magnetic field and a conductor. When this energy require by the electrons is supplied, they are able to move through out the whole circuit causing the flow of electric current.

Four spark plugs which has many turns of copper wire are placed on a board and two cables are connected to a circuit box which will be connected to the spark plug. Connect a wire to the gran of before plugs that is the positive terminal of the plugs. Put the wires together and tape it. A bar of magnet is attached to the plug. The size of the magnet determines the current to be produced. This is because greater the magnetic flux linkage, more emf induced and as such more current to be generated.