1. SUMMARY AND KEYWORDS

Project Title : GALVANOMETER

Abstract

Galvanometer is an electromechanical instrument which is used for the detection of electric currents through electric circuits. Being a sensitive instrument, Galvanometer can not be used for the measurement of heavy currents. However we can measure very small currents by using galvanometer but the primary purpose of galvanometer is the detection of electric current not the measurement of current. A galvanometer measures electric currents by their magnetic fields or magnetic force. The old "tangent galvanometer" compares the force on a compass needle in the center of a coil carrying the measured current, to the force of the Earth's field. The widely used D'Arsonval galvanometer measures the magnetic force on a small coil between the poles of a magnet, by observing how far it can push a twisted spring, like a clock's mainspring. Somewhat similar forces rotate the central rotor of an electric motor. The deflection of a magnetic compass needle by current in a wire was first described by Hans Oersted in 1820. The phenomenon was studied both for its own sake and as a means of measuring electrical current. The earliest galvanometer was reported by Johann Schweigger at the University of Halle on 16 September 1820. André-Marie Ampère also contributed to its development. Early designs increased the effect of the magnetic field generated by the current by using multiple turns of wire. The instruments were at first called "multipliers" due to this common design feature. The term "galvanometer," in common use by 1836, was derived from the surname of Italian electricity researcher Luigi Galvani, who in 1791 discovered that electric current would make a dead frog's leg jerk.

Keywords: Galvanometer, tangent galvanometer, D'Arsonval galvanometer, electric motor, Hans Oersted, electromechanical instruments, electric circuit, electric current, magnetic force, magnetic compass, magnetic field, Luigi Galvani, frog’s leg.

Our website is

http://prugalvanometer.weebly.com

2. PURPOSE: Our purpose of this project is to research, learn and present “How does Galvanometer work?” We can measure very small currents by using galvanometer but the primary purpose of galvanometer is the detection of electric current not the measurement of current.

3. SUBJECT AND CONCEPTION: Our subject of project is Galvanometer and how does it work? Galvanometer is an electromechanical instrument which is used for the detection of electric currents through electric circuits. Also, all ampermeters and voltmeters are a Galvanometer.

4.RESULTS AND DISCUSSIONS

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We did every parts of this project together and also created a website for international visitors and researchers.

5.CONCLUSION

A galvanometer is a type of sensitive ammeter: an instrument for detecting electric current. It is an analog electromechanical actuator that produces a rotary deflection of some type of pointer in response to electric current through its coil in a magnetic field. Galvanometer has lots of types and still uses nowadays in life.

6.REFERENCES

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