Alternating Current

AC current, said to be invented and developed by Nikola Tesla but that is not likely the case.

Alternating current (AC) is an electric current which periodically reverses direction, in contrast to direct current (DC) which flows only in one direction. **Alternating current** is the form in which electric power is delivered to businesses and residences, and it is the form of electrical energy that consumers typically use when they plug kitchen appliances, televisions, fans and electric lamps into a wall socket. A common source of DC power is a battery cell in a flashlight. The abbreviations AC and DC are often used to mean simply alternating and direct, as when they modify current or voltage.

The usual waveform of **alternating current** in most electric power circuits is a sine wave, whose positive half-period corresponds with positive direction of the current and vice versa. In certain applications, different waveforms are used, such as triangular or square waves. Audio and radio signals carried on electrical wires are also examples of **alternating current**. These types of **alternating current** carry information such as sound (audio) or images (video) sometimes carried by modulation of an AC carrier signal. These currents typically alternate at higher frequencies than those used in power transmission. Alternating Current

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Keely
"*The diamagnetic receding movement in the metal silver when brought close to the poles of a magnet operated by **alternating current**, is caused by "interatomic bombardment" of some 800,000 "corpuscular percussions" per second, or, expressed more exactly, by "intersympathetic vibrations" (non-operative on molecular, intermolecular or atomic sympathy, but penetrating within these to the interatom) or "interatomic bombardment*". [DIAMAGNETISM - Snell]

In 1886, on March 20, William Stanley Jnr demonstrated the first complete system of high voltage Alternating Current transmission, consisting of generators, transformers and high-voltage transmission lines. His system allowed the distribution of electrical power over wide areas. He used the system to light offices and stores along the main street of Great Barrington - the location of his West Avenue family home. Stanley's transformer design became a prototype for future transformers, and his AC distribution system formed the basis of modern electrical power distribution.

In 1878, the world's first hydroelectric power scheme was developed at Cragside in Northumberland, England, by William Armstrong. It was used to power a single arc lamp in his art gallery.

The old Schoelkopf Power Station No. 1, US, near Niagara Falls, began to produce electricity in 1881. The first Edison hydroelectric power station, the Vulcan Street Plant, began operating September 30, 1882, in Appleton, Wisconsin, with an output of about 12.5 kilowatts.By 1886 there were 45 hydroelectric power stations in the United States and Canada; and by 1889 there were 200 in the United States alone. [anon]

See Also

AC Generators
13.06 - Triple Currents of Electricity
15.10 - Dissociating Water with Alternating Current - Puharich
16.25 - Magnetic Attraction caused by Dominant Current of Electrical Stream
16.29 - Triple Currents of Electricity
Figure 7B.19 - Magnetic Lines of Force developed from Induction of Current Flow