MORAY DIRECT CONVERSION RADIATION VALVE

By Bruce A. Perreault - Final report - December 27, 2014 - Revised December 30, 2014

The Moray solid state energy converter doesn't rely on damaging neutron bombardment which is present in a conventional high energy nuclear fission reactor. Electrical energy is secured through the use of what is known as the charge multiplication effect in semiconductor materials. The charge multiplication is brought about by means of a suitable radioactive source. In 1899 Ernest Rutherford, James Chadwick, Ph.D., and C.D. Ellis, Ph. D., were the first to refer to the direct conversion of radioactivity as a means to identify particles, while Dr. Gustave LeBon referred to its process as early as 1897.¹

The direct radiation energy converter that I discuss in my report herein takes advantage the energies emitted from a carefully selected low energy gamma emitting radioisotope, when used in conjunction with a suitable semiconductor material which is doped with impurities that give rise to secondary electrons. The effects of gamma radiation on the semiconductor material results in the delivery of an appreciable amount of energy derived from the dissociation of the radioactive material.

The semiconductor and radioisotope source is introduced into a properly designed <u>radio-valve</u>. The passage of gamma radiation through the semiconductor generates extensive ionization and electron generation which oscillates at a high frequency rate. The radioactive source ionizes a low pressure inert gas environment within the glass enclosure of the valve. The valve is an energy generator which is kept alive because of the excited radioactive source atoms. An anode is designed into the conversion valve to collect generated secondary electrons and becomes the receptor of the environment energy within the valve.

The valve is coupled to an oscillating tank circuit which is tuned to synchronize with the disintegrations of the radioactive source, where electrical energy is obtained. Electrical power is derived from this direct conversion process from the radioactive environment (highly ionized low pressure inert gas) within the valves through synchronized harmonics and resonance. Thomas H. Moray in his research notes referred to this as being a "Direct Conversion, Electrical Power Cavity Resonator." He stated that "energy is released with this method at a moderate rate and without fission taking place." The valve energy converter is operated in conjunction with oscillating circuits which include high capacitance and provide a means through which the oscillating energy may pass to another valve and to its associated oscillatory circuit. The overall circuitry is arranged in cascade or series, that is, the first stage is followed by a second, third, etc... and these stages are essentially isolated from one from another in such a way as to remove the possibility of unwanted feedback from one stage to the other. Again, this technique of cutting down or blocking the undesirable feedback is a unique feature of the Moray's device. The oscillations which are set up in the various oscillating circuits are deliberately coupled one with another by means of a type of automatic frequency control. Thus, it is essentially a frequency-modulated or frequency controlled pulse device. Moray reported that his valves had to be critically matched so that they would be in perfect harmony or resonance with one another. My fix to this finicky requirement is to couple finely tuned tank circuits to the valves.

The action in the second stage is similar to what takes place before it in the first stage, only at a higher ratio of energy. The charging of high capacity capacitors initiates the second stage oscillations. The oscillations are then strong enough to operate the second stage valve. This is accomplished by synchronizing each valve to be in harmony with one another, keeping them alive by the energy controlled by the larger valves. In this circuit the energy builds up through oscillations that are in tune with the radiating oscillations of the radioactive sources within the valves.

I conclude the Moray valve was a self powered radioionic tube. It was used to gate the ever present energy in the atmosphere of the planet. Moray reported that he used a low energy radioisotope in his valves. This indicates it was used to act as the energy pump. From these facts we can infer that it was the circuitry, not the valve, which produced the amount of electrical power reported by him.

¹<u>Radiations from Radioactive Substances 1951</u>