In CGS system, dilectric constant for vacuum e_o taking q_o as the unit of electric charge (in place of CGSE Unit) is given by:

$$e_o = \pi / 2c \qquad (5)$$

Substituting in (1) experimentally determined value, $q_e = 4.8 \times 10^{-10}$ CGSE units, and supposing [4] the value of void radius $r_e = 1.5 \times 10^{-11}$ cm.

$$cm^3/s = (7.2)\ CGSE \qquad (6)$$

The above supposition on the radius of electron is based on the following extract [4]. "If we proceed from modern theoretical electrodynamics, which has been established better than any other field theory, the conclusion seems to be that the electron has enormous dimensions, not 10^{-13} cm, as expected from classical physics, but 10^{-11} cm is the size of the region in which the vacuum about the electron is polarized".

GENERATION OF SPACE POWER

As shown in Fig. 2B, for computation of electron's charge on interface, the product of speed of spinning space at the elemental surface and its area dA is taken. This indicates that for all values of VF varying from zero to c, charge is produced. Therefore, rotation of cylindrical surface at A will generate in its interatomic space rotational charge (q_{ro}) given by similar relationship as for electronic charge. Neglecting the area occupied by atomic nuclei and orbital electrons at surface A.

$$q_{ro} = \text{space surface} \times \text{rotational speed}$$
$$= (2\pi r L)\ (2\pi r N) \qquad (7)$$

where
- r is the outer radius of rotor
- L is the rotor length
- N is revolution per sec.

Rotational charge generated at the cylindrical surface A′ is:

$$q_{ri} = (2\pi r_i L)\ (2\pi r_i N) \qquad (8)$$

where
r_i is the radius of the inner rotor.

Since the direction of the magnetic field in the outer rotor at surface A is opposite to that in the inner rotor surface A′, the net rotational charge (q_r) generated in the rotor is:

$$q_r = q_{ro} - q_{ri} = 4\pi^2 LN(r^2 - r_i^2) \qquad (9)$$

In CGS system, substituting the values in (9), L = 23.495 cm, N = 120 r/s, r = 17.78 cm, r_i = 7.62 cm,

$$q_r = 287 \times 10^5\ cm^3/s.$$

Converting cm^3/s to CGSE units from (6),

$$q_r = 2066.4 \times 10^5\ \text{CGSE units} \qquad (10)$$

Since $q_e = 4.8 \times 10^{-10}$ CGSE unit, numbers of electrons (N_e) equivalent to charge q_r will be:

$$N_e = 2066.4 \times 10^5 / 4.8 \times 10^{-10} \qquad (11)$$
$$= 4.30 \times 10^{17}$$

Energy in the electrostatic field of N_e electrons is computed as below:

Electrostatic energy (U) of a point-charge as per conventional physics is given by:

U = q_e^2 ———— $2\,(4\pi E_o)$ (12)

1 θ ——— r o [ ]

where r, the radial distance from the charge centre, varies from zero to infinity. With void-centre of electron, the minimum value of r is taken as r_e (and not zero) since void is fieldless zone. (The present difficulty in physics of infinite quantity of energy in the field of a point-charge is avoided with void-centre structure of electron.)

In electron structure (Fig. 2B), the VF distribution is axi-symmetric, and consequently the charge distribution on the interface is also axi-symmetric rather than being spherically symmetrical as in case of a point-charge. The co-efficient, $\pi/4$, appears in (1) because of axi-symmetric charge distribution, and will be dropped for a spherically symmetric charge distribution. Equation (1) for spherically symmetric charge will therefore become:

$$q_e = 4\pi r_e^2 c \qquad (13)$$

Substituting the value of e_o from (5) in (12) and from (13) expressing q_e in terms of r_e and c,

$$U = (4\pi r_e^2 c)^2 / 2\ (4\pi^2/2c)\ r_e$$
$$= (3/\pi)\ (4\pi r_e^3 c)\ /3.$$

which from (3) becomes:

$$U = (3/\pi) m_e c^2 = (3/\pi) 10^{-6}\ \text{ergs.} \qquad (14)$$

Net energy produced from rotational charge from (11) and (14),

$$E = (4.30 \times 10^{17})\ (3/\pi)\ 10^{-6}\ \text{ergs.}$$
$$= 41\ \text{kWs} \qquad (15)$$

which is close to the maximum 45.8 kW power drawn from the machine.

Generation of Free Electrons

Rotational charge is added to the neutral system of atoms at surface A and A′, thus causing release of orbital electrons from the atoms. The free electrons are oriented by the magnetic field B such that the angular momentum of the electron is parallel to 3 vector (Fig. 3A). The VF produced due to rotation of cylinder interacts with the VF in the vortex structure of electron (Fig. 3B) pushing electrons to one side, thus creating positive and negative polarities (Fig. 1A) between the shaft and the surface A′. Opposite polarities develop between the shaft and the surface A, due to opposite direction of B and consequently opposite orientation of free electrons.

Constancy of Space Power Generation

The property of nonviscosity of space maintains the rotational charge energy in the rotor without any dissipation. The energy from VF is taken for the release of orbital electrons from the atoms. When the load circuit is closed, the electrons return through the load circuit to the positive pole, unite with positively charged atoms and give off energy to VF which again releases orbital electrons, thus completing the cycle. The VF in the rotor is superposed with opposite VF when the machine is brought to rest due to retardation of the rotor and space power generation reduces to zero.