

THEORETICAL AND EXPERIMENTAL RESOURCES ELEMENTS IN ROTATION PERIOD OF THE ELECTROSTATIC MOTOR, CONSTRUCTION FOR DIFFERENT ROTORS SOLUTIONS

DELIMAN Titus
University of Oradea
tdeliman@uoradea.ro

Key words: propulsion, motor, electrostatic, electrical field, electrostatic effects.

Extended abstract; In the construction of the electrostatic motor, which we developed at the University of Oradea,, the rolling spherical bodies caused the rotation at the level of the rotor. For this reason is so important the mechanical collector solution of construction. For two kinds of rotors and many modes of rolling spherical bodies, we developed a mathematical approximation to calculate the rotation periods in these cases. After this, we determined the experimental values to compare this with the calculated periods, in this way tray to obtain a mathematical relation for variation the rotation at the rotor level. In each of them mounted different numbers of rolling bodies, one to four at the first type rotor and of course, one to tree for the second.

The mathematical model for this kind of motor based on the energetically balance in two situations; for a single rolling body, after that, for a motor with two kinds of rotors.

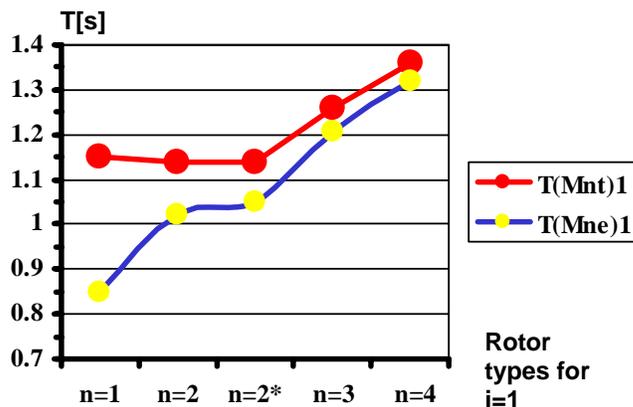


Fig. 1 Comparison between theoretical and experimental values for rotation period, type $i=1$

In fig 1, for example presents the theoretical vs experimental values for the rotation periods, (T(Mnt)1-mathematical value).

Like its show in both situations the rotation period its grow by the number of rolling bodies motivate by the frictions forces between rolling body, glass plain and metal ring. If we compare next theoretical values, T(M2t)1, T(M3t)1, T(M4t)1 with experimental ones, T(M2e)1, T(M3e)1, T(M4e)1, can see haw to close there are, probably in these cases more then one rolling body

push the rotor instantaneity, fig.1.

Bibliography references

- 1.T. Maghiar, T. Deliman, K. Bondor, Electrostatic motor. International Application under the patent cooperation (PCT) 2003. WO 03/041259. A1.
- 2.T. Maghiar, T. Deliman, K. Bondor, Motor electrostatic. Brevet de invenție OSIM RO 119848 B1 2005.
3. T. Deliman A few constructive resources about a new electrostatic motor. Annals of the Oradea University, Fascicle of Management and Technological Engineering. 2006.
4. T. Deliman Theoretical and experimental resources elements in electrostatic motors construction. Fascicle of Management and Technological Engineering. 2007.