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## Polarizing Magnetic Field Generator

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*Keywords:* magnetic field, electric field, polarization, rotation.

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*Strictly as per the compliance and regulations of:*



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## I. DESCRIPTION OF THE GENERATOR

Around the conductor with the current there is a magnetic field. If with the aid of the external current source was excited in the solenoid, or cylinder, thus it will be such to magnet with the appropriate poles.

Figure depicts the diagram of the polarization generator of magnetic field.

Generator consists of the revolving cylinder, around which two conductors are located. If we between the cylinder and the conductors create a potential difference, then cylinder is polarized along the line of that connecting conductors. During the rotation of cylinder its polarization, caused by the presence of free electrons, will remain fixed, while the lattice of cylinder will revolve, which is equivalent to the excitation of current in the cylinder. The current indicated will convert the revolving cylinder into the magnet, as shown in figure.

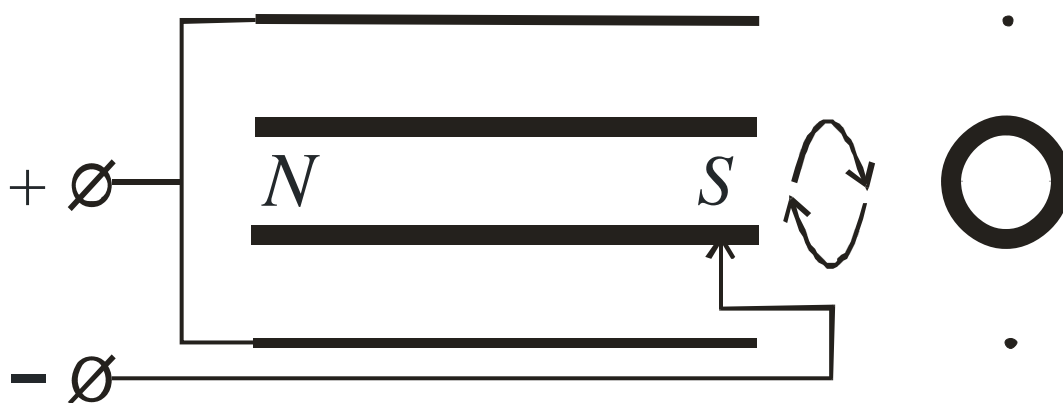


Figure 1

Below is a photo of the experimental model of the generator. It includes a high-speed motor that provides three speeds of rotation: 30000, 40000 and 50000 rpm (left side of the photo) and a rotating cylinder made of German-silver.

This cylinder is placed in the the transparent of plastmassov to shell. In parallel to German-silver cylinder are placed two electrodes, on which will be supplied voltage about 30 kV from the elektroformnoy machine. The appearance of magnetic field near the face of German-silver cylinder is fixed with the aid of the compass (it is visible in the end of the right side of the photograph). Throw of the pointer of compass during the rotation of cylinder from its stationary position is the greater, the greater the speed of the revolving cylinder.

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Figure 2

## II. CONCLUSION

Around the conductor with the current there is a magnetic field. If with the aid of the external current source was excited in the solenoid, or cylinder, thus it will be such to magnet with the appropriate poles. In the article is described the polarization generator of magnetic field and its diagram is given, in which the magnetic field is created with the aid of the rotation of the conducting cylinder polarized in the electric field.