

The invention refers to the field of power engineering, in particular to processes and devices for fuel combustion in the electric field.

The process consists in the fuel mixture and oxidant supply into the combustion zone, ignition and combustion of the mixture in the electric fields – longitudinal and transversal, the latter being formed by the electrodes placed round the flame and control of the intensity and frequency of the electric fields, wherein, according to the invention, the combustion of the mixture is carried out in static electric fields, and the control of the intensity and frequency of the transversal electric field is carried out by the control of electrode rotation round the flame.

The device for the realization of the process consists of a burner, an electric motor and electrodes, placed round the flame and connected to the outputs of the current source with adjustable intensity, wherein, according to the invention, the electrodes are made in the form of two metal rods, placed parallel to and diametrically opposite about the burner axis with the possibility of rotation round it, kinematically joined with the electric motor with the possibility of controlling the rotation, in the capacity of current source is used the constant-current source, the electrodes being joined by a mobile commutation, one to the positive output and the other to the negative output, and the burner is connected to earth.

The result consists in a more accurate control of the geometrical, kinetic and thermal characteristics of the flame.

Claims: 2

Fig.: 2