The invention relates to the power engineering and may be used in the heat power engineering equipment: steam boilers, thermal power stations, industrial furnaces etc.

The process includes heating of the combustible gas and of the combustion blast air, air enrichment with oxygen and nitrogen separation therefrom, gas and air ionization in the radial electric field with opposite polarity, oriented crosswise the leakage direction thereof. In the radial electric field the combustible gas and the combustion blast air is transformed in partially ionized plasma, which then is magnetized and centrifuged by application of a magnetic filed. Heating of the combustible gas and of the combustion blast air is carried out by recuperation of the dissipated heat at the application of the magnetic and electric fields, and mixing, ignition and burning thereof is realized after separation by centrifuging of the sulphur and nitrogen from the combustible gas and of nitrogen, respectively, from the combustion blast air.

The installation for combustible gas burning includes a gas supply and separation chamber with a system of coaxially installed electrodes: one inner, made in the form of a rod with the rounded free end and another outer, tubular, winded with a solenoid. Consecutively with the combustible gas supply and separation chamber (1) there are placed a combustion blast air supply and separation chamber (5), identical with the first one, being separated from it by an impermeable wall (11); and a chamber for mixing of the separate components (9); coaxially with the inner electrode (2) it is installed the second inner tubular electrode (6), its cavity, forming a central duct for outlet of the separate components, connects the combustible gas supply and separation chamber with the chamber for mixing of the separate patents. The solenoids, winded onto the outer tubular electrodes, are installed in casings (16, 17) coupled by means of some pipe-lines at the corresponding inlets of the combustible gas supply and separation chamber and the combustion blast air supply and separation chamber.

Claims: 2 Fig.: 1

