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The invention refers to the power engineering and may be used in the thermic power equipment.

Process for burning comprises the fuel gas and fuel blasting air preheating, mixing thereof, ignition and burning, by that before preheating the fuel blasting air is saturated with oxygen by passing thereof under pressure higher than the atmospheric one through the stratum of porous granules for nitrogen adsorption.

The installation for fuel gas burning contains a burner with a mixing chamber coupled to the furnace embrasure and chambers for fuel blasting air and fuel gas feeding, coupled accordingly to the outlets of preregenerative heaters of fuel blasting air and fuel gas, situated into the furnace burned gas, and the heaters inlets are coupled to the high pressure compressors. Into each burner feed chamber it is disposed a system of corona electrodes and into the mixing chamber - a system of electrodes for storing the gas ionizing particles, the latter being connected to the high voltage source. The inlets of the two separators containing porous granules strata for nitrogen adsorption, are coupled in parallel, to the compressor.