COMBUSTION PERFORMANCE OF A GAS FIRED BURNER EQUIPPED WITH ULTRASONIC GAS GENERATOR

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ABSTRACT

The paper presents the experimental results on the gas burner equipped with a radial gas-dynamic ultrasound generator of a heating furnace. The measures to increase energy efficiency of fuel-fired furnace - use of high excess air and flue gas recirculation lead to an increased emission of carbon monoxide. This paper proposes and tests a solution to reduce the carbon monoxide emission by using a radial gas-dynamic generator of ultrasounds on the existing burner. Different pressures of the generator supply air, and different nozzle slits of radial generator have been used. The adjustment of the gas burner equipped with ultrasound generator was performed on a test ring using air instead of gas fuel. It was found that the minimum CO emission corresponds to a pressure of supply air of 1 bar and nozzle slit of 0.8 mm of the ultrasound generator.

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