

USING A HIGHLY EFFICIENT GAS CLEANING EQUIPMENT FOR REDUCTION TECHNOGENIC IMPACT ON THE ENVIRONMENT

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Growth in the scale of economic activity leads to increased human impacts and disturbance of equilibrium in the environment. Along with the depletion of natural resources increases environmental pollution, in particular water and air. This significantly undermines the natural resource potential of the state's development, negatively affects the welfare and health of the population, and poses a threat to environmental safety [1].

Consuming natural resources, industrial enterprises are sources of complex environmental contamination. Activities of industrial enterprises has a negative impact on the state of ecosystems surrounding areas. Deposition of contaminants from the waste gases results in contamination of the soil and migration of heavy metals in the groundwater and surface water. The problem is compounded by the fact that the exhaust gases contain different by dispersion of the solid particles. This poses the problem of the development of environmental protection measures for air protection from emissions of industrial enterprises [2]. One way to reduce the amount of pollutants released into the air with the flue gases is the selection of highly efficient gas-cleaning equipment, which must take into account several factors: physical and chemical characteristics of the carrier gas, the characteristics of chemical and particulate contaminants [3].

One of the ways to intensify the inertial-diffuse deposition processes, which form the basis of the technology of "wet" cleaning of gases from aerosols (fog, dust, smoke, etc.), is to carry out these processes in the regime of developed turbulence. Its implementation is possible in devices with a regular pulsating plug (RPP). Devices with on-load tap-changers are characterized by a high efficiency of capturing solid particles of various dispersion, the ability to self-clean the contact elements from adhered dust, low material consumption and high reliability in operation, which makes them very promising in wide industrial use.

Studies of the equipment with an on-load tap-changer allow us to speak about the possibility of its use for the complex cleaning of dust and gas emissions in order to reduce the negative impact on the environment.

References:

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