THE CONNECTION OF WORKING PROCESS OF BURNER DEVICES BASED ON STREAM-NICHE TECHNLOGY AND ECOLOGICAL DESCRIPTIONS OF FIRE ENGINEERING EQUIPMENT OF NATURAL GAS FIRING

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The rates of development of industry constantly grow and that's why negative influence of anthropogenic sector on nature becomes more noticeable. In connection with such threat to the future of humanity, the conception of sustainable development (CSD) is accepted as the new system of life. [1]. In obedience to this conception, all processes of vital functions of population of planet are examined complex, now an efficiency means not only economical operation (economy) but also ecofriendlyness and social effect.

Intensity of progress is provided by energy, that is why powers of energy generation and negative influence of this process are growing constantly. Power industry is based on fire engineering (FE) equipment and efficiency of the last ones is a complex concept too, according to SCD.

Novadays considerable attention is spared on ecofriendlyness of processes with the maintenance of high indexes of economy and reliability. The complex adjusting and improvement of the existent FE settings realised with the using of modern technologies, and burner devices (BD) have a considerable influence.

Importance of complex approach consists in that FE equipment are the difficult system of physical and chemical processes which are closely connected among them. These intercommunications have difficult character and not always obvious, that is why one improvement a parameter often causes changes of other one, which is not always controlled. Usinf of high-technological BD, as like BD based on stream-niche technology (SNT), allows to decrease pressur resistance of the system due to organization of burning process and realization of hydraulic-thermal-chemical approach.[2] At first it allows to decrease expenses electric power and reduce extrass due to incineration of less of fuel for an output on nominal parameters, and, for the second, to decrease vortex formation in the air-gas path and to decrease noise and vibration due to the decline of sufficient power of electric motor and in the.

For example the adjusting of harmful matters emission with organization of the furnace regime at NOx abatement with underburning (that is proves out with occurrence of carbon monoxides), the toxicness of exhaust gases grows, so as except for CO, substantially the output of benzapyrene grows,[3] which exceeds toxicness of nitrogen oxides on a few orders. Also in this situation can take place decline of efficiency factor, so as underburning connects with the decline of temperature in the flame core, so a radiation heat exchange gets worse, that

conduces the temperatures of actuation fluid to the decline, and consequently economic value at diminishing of charges on fines for extrass and worsenings of initial parameters in the process of energy generation is ambiguous.

It is necessary to use complex approach in process with a FE equipment and to take into account all wide spectrum of ecological aspects, due to existence of such connection of working processes of FE settings, taking into account conception of steady development. It allows to provide the use of the newest going near incineration of fuels, such as SNT.