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## **AIR POLLUTION REDUCTION BY USING OF LOW NO<sub>x</sub> BURNERS FOR FURNACES AND BOILERS**

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### **Abstract**

Air pollution reduction can be mainly made by modernization of furnaces and boilers. At present, modernization means using of low NO<sub>x</sub> burners for decreasing pollutants emission from exhausted gases. In the same time, modernization means decreasing of energy consumptions, i.e. reduction of CO<sub>2</sub> quantities in the atmosphere.

This paper presents recently designed, manufactured and tested low NO<sub>x</sub> burners types, of own original conception, for furnaces and boilers. The research results emphasized the influence of some parameters on NO<sub>x</sub> emission from exhausted gases. Some important parameters were pointed out, such as: the burner and fuel type, the air ratio coefficient and the chamber temperature.

Also, there are presented experimental results obtained on industrial furnaces and boilers equipped with low NO<sub>x</sub> burners. The experimental results revealed the following situation: pollutants emission below the limit values of EU standards; reduction of energy consumptions against the classical burners with 10-30%; improving of heating uniformity.

*Key words:* boilers, burners, furnaces, NO<sub>x</sub>

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### **1. Introduction**