
SUBECONOMIZER FOR IMPROVEMENT OF ENERGY EFFICIENCY OF CDQ PLANT MODULE

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The article is devoted to the adjustment of the efficiency of the coke dry quenching plant (CDQP) by installing the subeconomizer in the technological scheme of coke production. A work description is presented of the subeconomizers and analyzes the advantages of the subeconomizers on the existing and new CDQP blocks.

It has been emphasized that in coke production one of the most important factors is the need to work all parts of the technological chain with the full productivity. Decreased productivity or disruptions in certain areas can lead to significant losses of the final product. It is shown that the dry coke quenching plant should ensure not only stable operation of the coke battery, but also the required level of coke supply for blast furnace production. Therefore, violation of the technological regime of DCQP can critically affect the production of iron and steel. The feature of dry coke quenching technology is emphasized: the increase in productivity inevitably causes an increase of the temperature of quenched coke. It is shown that one of the ways to maintain the temperature of the quenched coke at the required level is to install a subeconomizer (SE) in the scheme of DCQP.

The experience of SE "GIPROKOKS" in designing the reconstruction of existing DCQP is underlined. Data on the operation of the DCQP with the SE included in the technological scheme (which has been successfully operated for more than three years) and without it are given. SE "GIPROKOKS" studies, develops and implements new technologies that can be used in the construction of new coke plants, as well as in the reconstruction of existing ones.

It is shown that the use of subeconomizers in dry coke quenching plants allows to increase the productivity of DCQP units on quenched coke by about 10 % while maintaining the required temperature and quality of the obtained coke.

Keywords: dry coke quenching, temperature of quenched coke, coke yield, subeconomizer, energy efficiency.

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