
ENVIRONMENTAL PROTECTION AND PRINCIPLES OF WASTE UTILISATION IN COKE PRODUCTION

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Today, attention to environmental protection is growing significantly. Such protection should be part of the overall interaction between society and nature, which takes place within the biosphere, the outer shell of the Earth inhabited by living beings. The thickness of the biosphere is less than 20 km and covers the upper horizons of the lithosphere, water, and the surface layer of air - the troposphere (8-12 km from the Earth's surface). This protection can only be effective if everyone takes these issues into account in their production and everyday lives. If this prerequisite is not met, the biosphere is polluted with a large number of harmful substances, including xenobiotics, which are not found in nature and cannot be neutralised naturally. Waste generation is an inevitable consequence of human activity, as the existence of waste-free technologies contradicts the fundamental laws of nature, in particular, the first and second principles of thermodynamics. Coke production is characterised by a significant amount of various wastes, which account for 0.1% of the processed charge weight. Their disposal is a complex and important scientific and technical problem. Among all possible ways of waste management, the most efficient is its utilisation by using it to produce marketable products. The amount of waste added to the charge should ensure that the quality of coke, gas and coking chemicals from the charge with waste additives changes compared to the charge without additives, usually within the error of determining the relevant indicators, or at least allow for the production of products in accordance with applicable regulatory and technical documents. In accordance with these principles, we have carried out pilot works on the utilisation of a number of the largest coke production wastes in the charge.

Keywords: environmental protection, coke production, bulky waste, management, utilisation, coal charge, commercial products, quality.

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