
THE MAIN AIMS OF THE INSTITUTE RESEARCHES FOR THE DEVELOPMENT OF A COAL RAW MATERIAL BASE OF COKING FOR COKE-CHEMICAL ENTERPRISES OF UKRAINE

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The main directions of SE “UKHIN” researches in the field of coal coking raw material base for scientific support of the production activities of coke-chemical enterprises of Ukraine has been considered. It has been shown that a feature of the raw material base formation for the domestic coke-chemical production in recent years is a significant reduction in the production of Ukrainian coking coals. The research results and rating of a large number of imported coals of near (Russia, Kazakhstan, Poland, the Czech Republic) and distant (USA, Australia, Canada, Indonesia, etc.) foreign countries has been presented.

More than 300 samples of foreign coal were investigated in SE “UKHIN” during the period from 2010 to 2019. The transition to an inter-basin resource base required a new approach to assessing and comparing the properties of coal within the same brand. The questions of optimization and differentiation of the compositions of the coal blends taking into account the technical condition of the coke oven batteries in modern conditions has been described. The reasons and principles of development of the coefficients of coals consumer value based on existing coefficients of coal technological value has been shown, allowing to give a comparative assessment of the coals of the same brand, but from different suppliers.

The results have been presented of studies for use of hydrocarbon by-products of coke production as a binder in the briquetting of coal blends. This technological approach can provide a significant reduction in the coke cost (and, consequently, ultimately increase the competitiveness of Ukrainian metal in the foreign market) by partially replacing of the expensive imported components of the coal blend.

Coal preparation issues under conditions of transition to an inter-basin raw material base using the screening operation of small classes of coal before crushing have been considered. The questions have been touched of technical assistance in equipping factory laboratories with research methods, as well as in the advanced training of their employees.

Keywords: coal, coking, blend, inter-basin raw material base, hydrocarbon additives, binder, briquetting.

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