TRANSFER OF OPERATING COKE BATTERY TO LOADING WITH STAMPED CHARGE

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It is known that the production of blast furnace coke using stamping technology allows the use of a large amount of cheap gas coal without reducing the quality of the blast furnace coke obtained. However, despite the fact that this coking technology has been used for a long time, the literature data as per the effect of increasing density on coke quality parameters are very scarce and outdated. Furthermore, the findings in these articles are sometimes contradictory.

Taking into account the above, the purpose of the study was to verify the appropriate cost-effectiveness and efficiency of coke production while optimizing the consumption of scarce raw materials, which would allow optimizing production in the conditions of an operating coke chemical enterprise.

The article describes the main technical solutions for transferring the operating coke battery from the technology of loading coking chambers by gravity to the technology of loading stamped coal cake and gives the results of the reconstructed coke battery. This project was developed and implemented by the companies SE GIPROKOKS and HuDe [1, 2].

It is shown that during the control observation period (19 months) of the enterprise's operation, the mechanical strength of coke M_{25} increased from 85,2 to 87,4 % on average; the coke strength after reaction CSR - from 48,9 to 53,9 %; at the same time, the index M_{10} was decreased from 8,0 to 5,9 %; and CRI - from 38,0 to 37,2 %, respectively, when working with the stamping technology compared to operation with the gravity method technology. Also, coke obtained using the charge stamping method is characterized by lower values of ash content and total sulfur content.

References:

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