
SOLUTIONS FOR THE RECONSTRUCTION OF COKE SORTING ASPIRATION SYSTEMS

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The paper summarizes the information on the operation of existing coke sorting aspiration systems at coke plants. It is shown that, according to the data of instrumental measurements carried out at operating coke plants, the actual emissions of dispersed particles from the exhaust pipes of coke sorting plants require the development of measures to reduce the emissions of suspended solids into the atmosphere. At the same time, almost all coke plants at coke sorting plants with wet coke quenching have aspiration systems with one-stage cleaning in wet dust collectors, which is justified by the relatively low initial dust content of the aspiration air. At the same time, at coke sorting plants, after dry coke quenching, the dust content of the aspiration air is much higher and reaches 10 g/m³. Given the high dust content, aspiration systems at such enterprises provide for a two-stage purification - in dry cyclones of the first stage of purification and in wet dust collectors of the second stage. Conclusions are drawn on the efficiency of coke dust collection processes in various dust collectors, and a justification for the use of dry methods of aspiration air purification in coke sorting systems is provided.

A new concept of an aspiration system with a dry dust collection method is presented and recommendations for the modernization of existing systems are developed. The basic technical requirements for the use of dry cleaning of aspiration air of coke sorting plants in bag and pocket filters (for sieving and transporting wet quenching coke) are presented. Recommendations for reducing the possible relative humidity of aspiration air in coke sorting systems (during sieving and transporting wet quenching coke) have been developed.

The design features of aspiration units with a dry method of aspiration air purification for wet coke quenching paths are presented.

Keywords: coke production, coke dispersal facilities, coke sorting plant, aspiration system, dust removal unit, pollutant emissions.

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